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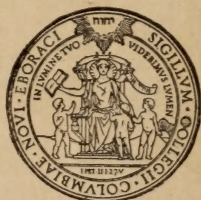
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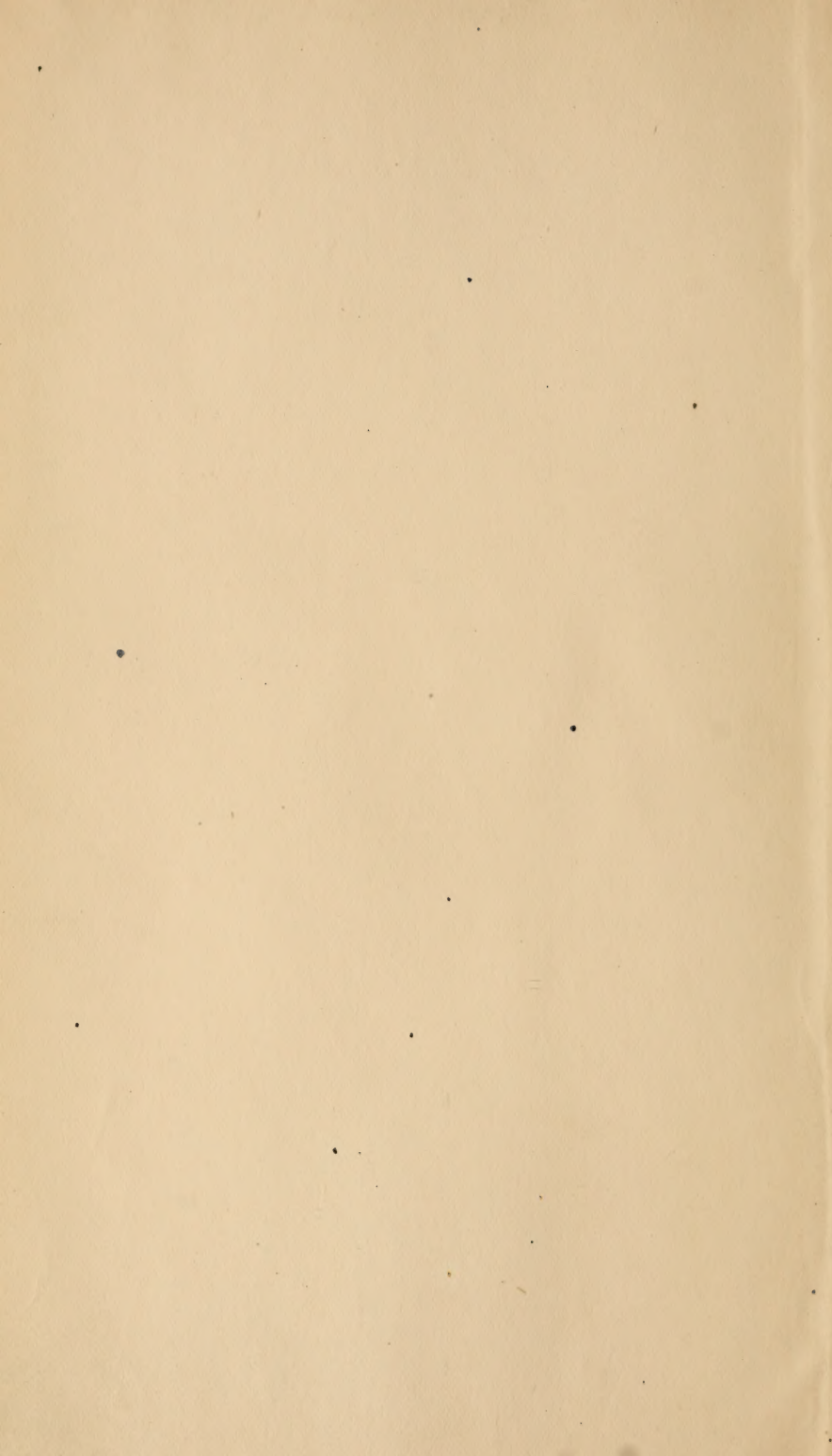
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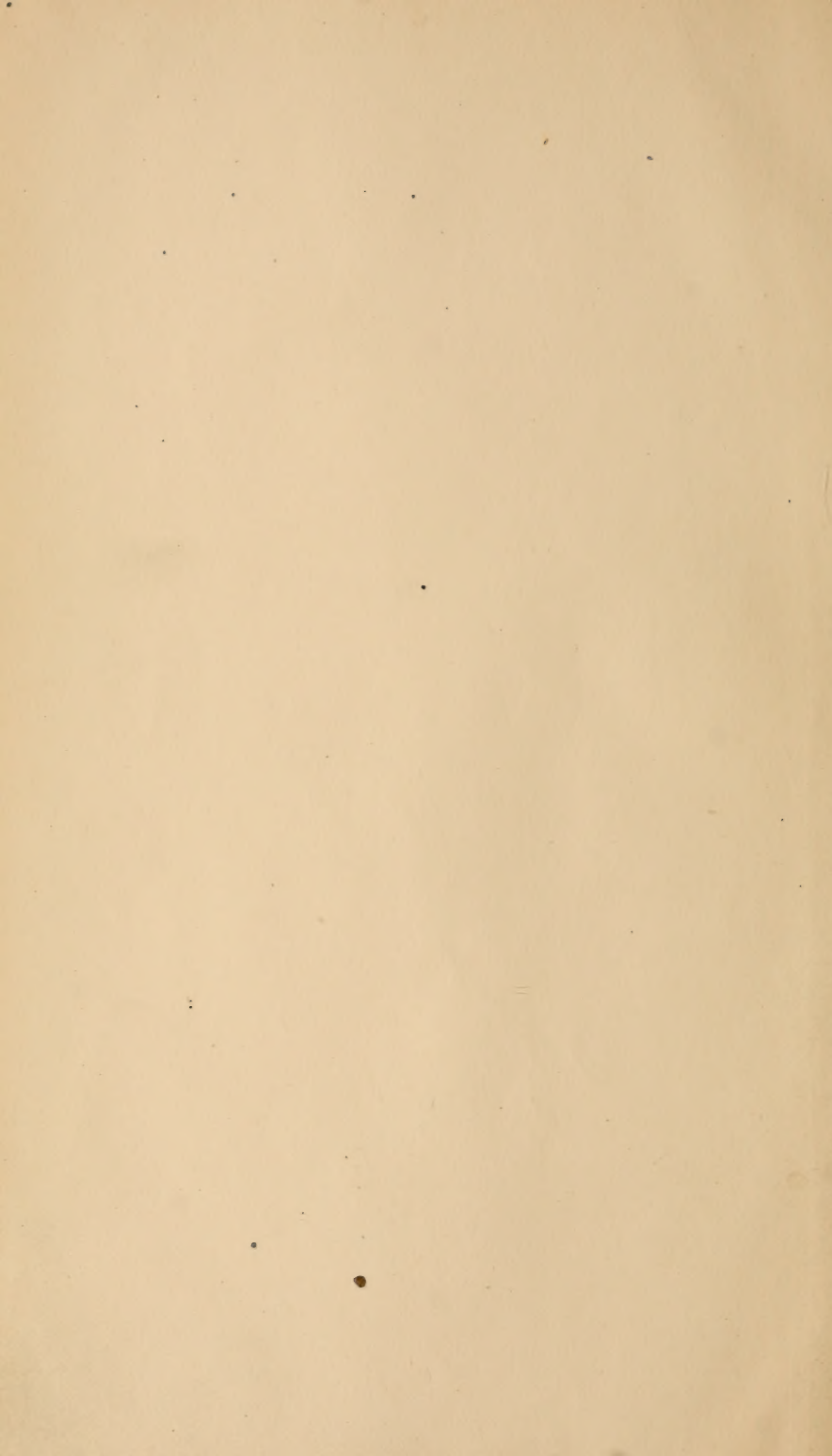
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DEMONSTRATION OF WORK DONE BY PATIENTS IN KINDERGARTEN.*

BY DR. RICHARD H. HUTCHINGS,

Superintendent of the St. Lawrence State Hospital, Ogdensburg, N. Y.

Before speaking particularly on the work which we are doing for improving the condition of demented patients, I wish to say a few words on the subject of employment in general—in which term I mean to include all forms of occupation and diversion. We have not many measures which will influence the minds of our patients. Those which we have may be summed up under the two terms—work and play. The human brain was evolved through countless centuries of struggle against the forces of nature and is, in fact, the product of man's adapting himself to his surroundings and providing for his needs. The difference between the brain of man and the lower animals is largely due to the fact that man has worked, and the higher races are those which have worked to better advantage than the lower. How then could we choose a more wholesome condition in which to place man than in an environment of work? Work was what made the brain—we must depend upon work to mend it.

Work and play may be said to be the natural expression of energy. Work differs from play in that by it something is accomplished. Either material has been converted from a less valuable to a more valuable state, or one has by study increased his mental powers or added to his stock of knowledge. In play there is not this element of advancement. Hence, play is not satisfying if continued long. It is, in fact, only imitation work. It is either a preparation on the part of a child for his life work, as a little girl who plays with dolls and at housekeeping or the youth in contests of skill and strength, or it is the attenuated remnant of the former daily toil of the race—hunting, fishing, boating, gardening—which are now only recreations but were

*Paper read at the Inter-hospital meeting, held at St. Lawrence State Hospital, October 25-26, 1911.

once the means of subsistence of our ancestors. So one may say that we can not get away from work. When we are through with real work we can only find relaxation in make-believe work. There is in play an element of relaxation—a loosening up of the tension. It really does not matter in play whether we win or not; we only make believe that it is important to gain the points or win the contest. Where there is something real or tangible to be gained from play, as a prize or a wager, then at once the play becomes work and no longer has the element of relaxation and make-believe which distinguishes play. Then we may say that work represents tension and play relaxation. Each is the complement of the other.

The only means by which we may interest our patients then is by the judicious employment of these two measures—work and play. Of these, work is the more important, for work possesses the element of material advancement and gain which play lacks. Work in that way appeals to another instinct—that of gain, of accumulating, of putting aside for to-morrow, of providing against the future. With the young, play in itself is sufficient. As age advances play becomes less important, and after middle age almost distasteful, and work becomes the dominating instinct. The lesson in this is that for the young we should provide more and a greater variety of amusements and less of monotonous work than for the older patients.

For those of us who are interested in the care of the insane, the subject of providing for the wants of our patients in this direction is one in which we have all felt the need of help, and nowhere, to my knowledge, is the subject being worked out in the careful manner which its importance deserves. The necessity of providing both work and play for our patients is not thoroughly appreciated. It is only generally known that employment is good for patients and idleness bad for them. When we go to a hospital for the insane and ask about employment, we have pointed out to us the various shops in which patients work, and are told how many find employment on the farm and on the grounds, in the kitchens, sewing rooms, etc., and it is certainly

creditable that most hospitals now provide ample work for all patients who voluntarily seek it or who will take it up upon the suggestion of the nurses or physicians. I have said elsewhere that the multiplication of industries in State hospitals has added greatly to the interest and enjoyment *of those patients who can work*, but it has done little to reduce the ratio of idleness upon our wards. I venture to say that should we go to the extreme limit of providing varieties of occupation, there would still be a very large number of idle patients. That is not what the idle patients need. What they want is for some one to take them in hand and train them to do something—and it must be literally taking them in hand, for many of them not only will not voluntarily rouse themselves to take part in work, but some will even struggle against it.

You have all seen instances of the good effect sometimes produced upon idle and excited patients by transferring them to another ward. There, amid the new surroundings and away from possibly irritating companions or environment, they have ceased to be disturbed and idle and have become interested in some kind of work. From the experience which we have had here, I feel safe in making the broad statement that there are very few of the so-called idle and disturbed class under fifty years of age, who, had we the time to devote to them, could not be reached by some measure of work or play and their condition improved thereby.

Dementia præcox patients are essentially creatures of imitation and habit, and very easily acquire bad habits. Like other human beings, they more easily acquire bad habits than good ones. They easily acquire the habits of being disturbed, of making assaults, of being destructive, of soiling and wetting themselves—and will continue these habits until something happens to break them up. I could cite numerous instances of disturbed patients who, after having broken a leg and being moved to a sick ward, or passing through an attack of typhoid fever, showed for a time great improvement. Sometimes the benefit was permanent, sometimes the patients were permitted to relapse into their old ways.

Some of you will doubtless recall that some ten or twelve years ago, thyroid extract was much talked and written about, and was said to greatly benefit certain classes of patients if given in a certain way. That certain way was to begin with a moderate dose and increase gradually until a very large dose was given. Then appeared a train of symptoms, among which rapid pulse, sweating, and muscular weakness, were noticeable. At the first appearance of such symptoms the patient was put to bed and the treatment continued. So the patient was in bed several weeks, almost always having been transferred to the hospital ward and given constant attention by nurses and physicians. It was often found that patients, while not in any sense cured, were benefited by this treatment. They would employ themselves and often would give up bad habits of speech and conduct. It was notable that some physicians had much better results with this treatment than others, and I have no doubt now that the benefit was entirely through the management which the patient received during this period. It is no longer used.

I might cite one case which I treated in this way, having then learned what the real benefit from thyroid consisted in. This patient was a woman who had through neglect acquired most indescribably filthy habits. It was her habit to stand crouched in a corner and if any one touched her or interfered with her in any way to assault and struggle desperately and blindly. She would not speak and was in every way a problem for the physicians and nurses. I began giving her thyroid extract in her food and when she had taken as high as 20 grains, three times a day for a while, she became so ill, that she gave up struggling and permitted herself to be put to bed. She was indeed very sick and seemed to realize it. I kept her in bed several weeks, giving her just the dose that would keep her perfectly limp and relaxed, and of course her filthy practices were discontinued and she had no energy to fight and struggle when given attention. So she gradually got out of the habit of doing these things and began to make her wants known by brief requests. While still in this condi-

tion, I would have her propped up in bed each day until she had folded a certain number of towels in a certain way which the nurse showed her how to do. She greatly disliked to be propped up in bed and soon learned that her only course was to get her folding done as quickly as possible and be permitted to lie down again. I gradually reduced the amount of thyroid that she was taking and continued insisting upon work, adding to it cautiously, until finally she got in the habit of doing whatever was requested. The nurse never relented but insisted upon the patient doing whatever had been requested, which were at first simple things that were easy to do, but gradually, after the patient was up and dressed, she was required to do other things, and finally to sew. When she was able she was one day taken to the sewing room and given a task which she did, and was during the rest of her life for several years a regular worker in the sewing room. She never returned to her bad habits.

I am not citing this case to recommend this form of treatment. On the contrary, I should advise against it, for we have better ways now of accomplishing the same thing. I cite it only to illustrate the point which I wish to make, and that is that patients may by neglect be allowed to drift into bad habits, and may be, after that, with great difficulty but nevertheless successfully, broken of these bad habits if enough time and attention can be devoted to them. There is no reason why we should have upon our wards patients of the class described. Their presence on our wards is a confession of our failure to handle them successfully.

Many of you here have witnessed the passing away of the camisole and of seclusion as measures of treatment. All of us are now agreed that if a patient be found secluded or in restraint it is a proper subject for inquiry and explanation on the part of the ward physician. Some of you now here will live to see the day when if a patient is found in a hospital for the insane, soiled, idle and assaulting, the event will occasion equal remark and will be equally a proper subject for investigation and explanation. Our disturbed wards and our disturbed patients represent our failures—the

number of the latter indicate our want of ingenuity and tact in dealing with them. When I say we, I mean it in the broad sense of physicians, nurses, friends and relatives, and the State as a provider of funds. Patients can not be cared for at the ratio of one nurse to eight or ten patients and some of them not drift into bad and disorderly habits. But when the lawmakers and public are made to realize the importance of more and better nurses, these things will be provided as everything else is provided when the public can be awakened to the necessity.

Those of us who have been in this work for twenty years already realize the enormous strides that we have made during that time in better care of patients, largely through the assistance of the trained nurse. Most important of all, in my judgment, are the attendants and nurses. They are constantly with the patients and should be better trained to appreciate the good that might be done by one line of conduct and the harm that they may do by another line of conduct or another attitude.

I am perfectly familiar with all the discouragements which beset us in an endeavor to raise the standard of care upon our wards. Notwithstanding, that is the problem which is now before us and we must attack it with all the energy and resourcefulness which we may command. Anything which will reduce the deadly monotony of our wards will help. I think that in one way we make a mistake in having our shops and industries removed from the wards. I wish that work of this kind could be introduced directly into the wards—many would then be attracted and interested who are not reached now. In one hospital in Massachusetts two sewing rooms have been closed and the manufacturing and mending are all done in the open wards.

The particular work which I wish to call your attention to to-day was inaugurated here in March, 1908—three and a half years ago. We started it as a calisthenic class and admitted only those patients who were idle. It began with simple marching to music and we provided the most stirring marches. The music was furnished by a piano, a violin, a base drum and cymbals. We detailed a large

proportion of nurses to the patients and they quickly took it up so that many could keep fairly good time within a few weeks. Some who showed interest were taken into another and smaller class, which, for want of a better name, we called our kindergarten class. There we provided bright colored pictures and material and paste for the patients to work with, and anything which would appeal to their interest—and most important of all, *a teacher who had a proper knowledge of the fundamental principles of teaching*, and an appreciation of the problem we had to meet here. We began with the simplest things—as stringing beads, cutting out pictures from magazines and pasting them in scrap books, etc. Many of these patients had been idle for years—some of them had done nothing for twelve or fifteen years. They were idle, disheveled, and had for a long time been dressed, undressed, and cared for as infants. In fact, we accepted into this kindergarten class only those whom the nurse could not get to do anything. Many of them had hands and fingers so stiff that the first care was to massage their hands until the use of them was in a measure restored.

In a number of the patients the fingers were so stiff and awkward that until they had been thoroughly worked with they were unable to do anything—unable to hold scissors, unable to pick up a button or pin, and had become almost helpless from disuse of the hands.

The first case which I wish to show you is one transferred here in 1907 from another State hospital with a transfer of chronic patients. There is very little history; the case dates back prior to the time we had good histories, but she seems to have been a patient in other hospitals since 1894, about 17 years, and had been but a few years in this country, so she did not speak the language. I will not go into the history. What I want you to know is that she is a case of dementia præcox of long standing, a terminal dement, and during the entire period of her hospital residence was idle. A note made in 1895 says: “Noisy, soils, violent, will attack anyone, has very untidy habits.” That was within a year after her admission to the first hospital. Here is another note at a considerably later period, December, 1903:

"Physically well. Mentally: demented; disoriented; nothing intelligent can be obtained from her." During all that time she was reported as idle, assaulting, wetting. One statement said: "She seems to have a tendency toward catatonia." That was a later note. A note in 1905 states: "Patient is so demented that she has to be dressed and undressed by attendant." These notes continued during all that period. When she was admitted here her condition was essentially the same. She continued soiling, wetting, muttering to herself in a low tone; could not make herself understood or ask for anything, or do anything for herself in any way. In that condition she was taken into our classes, both calisthenic and kindergarten, and while she has not as yet accomplished anything wonderful (none of them have), she has employed herself and given up, to some degree, her bad habits, and shown an interest in making fancy things. Here is a beaded belt she is making. It is nothing wonderful, yet she has followed the design, and shows she can be taught something when given the right attention. There is something she is making at present, a slipper, not very well done, many mistakes, but it illustrates that she can be taught to do things. When in the kindergarten class she is perfectly well behaved, makes no trouble or resistance, never soils or wets herself. On the contrary, she is neat and clean, and is learning to speak a little English. On the ward she is still disturbed at times. When she goes back to the ward, she very often becomes disturbed and scolds in her own language, which is Polish; and that is another point I want to make, that it is too bad after all the work and attention given these patients they are apt to go back to their wards and come in contact with irritating influences, which counteract the benefit received in class. She will ask for things she wants in the class, will also say "good morning," and expressions of that kind, but does not talk sufficiently so one can converse with her.

The next case I want to speak of is one I have already reported. I had the privilege of seeing her go down and improve again. This patient at one time was on one of our best wards. She was at that time (15 years ago) a mildly

demented patient, very pleasant and liked to run errands and do things for the nurses, and was very useful about the ward doing little things, but never work of any importance. The nurses employed her for bandaging and massage and she was always pleased with the attention. She was particularly the pet of one employee, who used to buy ribbons, etc., for her, but this employee died afterwards, and this patient, having no one particularly interested in her, fell back into the general line of patients and when the room she occupied was needed she was transferred to another ward. On that ward she did not do so well, was not so bright and cheerful, and had sullen spells. Afterward she became irritable and was removed again to another ward where she would not annoy anyone, and went from ward to ward gradually acquiring bad habits, and she went down. One day I saw sitting on the bathroom floor a creature in a most disheveled condition; she was wet; her head between her knees; her hair hung down over her face; she was as disheveled a creature as one could wish to see. When I asked the nurse who she was, she said it was F. R., the worst patient they had on the ward, and they had to keep her in the bathroom on tile floor owing to her soiling. I had gone far enough with this work to realize how all this had happened and saw that she needed personal attention, and upon my suggestion she was taken to the calisthenic class and put into kindergarten work, and after considerable time she has gradually improved. She now talks; before she was mute; she is now clean, where she used to soil. She has made this basket all by herself, and other work which shows that although she had become very demented and was apparently a hopeless case, yet with attention and teaching she could be made to employ herself, overcome her bad habits, and be a much less expensive and troublesome patient to take care of. She is now good natured and never assaults. She keeps herself clean, and instead of being the problem of the ward, as she was at one time, she is now one of the good patients. I do not wish to claim that we are able to cure them by this means. I very much doubt if any real effect is produced upon the disease at all.

Dr. La Moure thought at one time that some of his patients gave up their hallucinations. I do not believe that is true. They do give up some of their bad habits, but it is always questionable whether the bad habits are essentially part of dementia præcox. Dementia præcox is a deterioration process, but I can not believe that bad habits—irritability, soiling, wetting, and crouching on the floor, are any part of the disease. I think those are only bad habits which are acquired by patients who are susceptible to bad habits, and with care and attention they might be avoided. We know that many dementia præcox patients never acquire them. We know some of them are steady workers, employed on farms and driving teams, and doing very good work, yet are deteriorated and hallucinated. There are others with the same disease, who are the problems of the institution—disturbed, noisy, violent, filthy—but I think those bad habits have no part in the clinical picture of the disease.

I have shown a number of samples of work done by these patients—baskets, pictures, sewing, beadwork, scrap books, etc., and all the work which you see here was done by this class of patients. All of them were deteriorated, all of them idle, and in all probability would have continued so if they had not been taken in hand. I am very much pleased to say that eleven patients out of this class have gone home. In all probability none of them would ever have gone home except for the help they received in this class. They were not much improved mentally, but when their relatives came to see them and found them quiet and orderly, they decided they could take care of them at home, and have done so.

I should be glad to hear any discussion on this subject. I have no doubt that all of you have had patients who were rescued from bad habits by some particular method, and it would be interesting to hear your experiences with various patients and various methods of treatment.

DISCUSSION ON "OCCUPATIONS FOR THE INSANE AND
THEIR THERAPEUTIC VALUE; WHAT IS NOW
DONE AND WHAT, IF ANYTHING, FUR-
THER SHOULD BE DONE."*

BY C. FLOYD HAVILAND, M. D.,
First Assistant Physician, Kings Park State Hospital.

It seems almost trite to discuss the therapeutic value of occupations for the insane, so thoroughly has practical experience demonstrated that it is the most powerful single means at our command in curative treatment, and that appreciation of this fact has not been confined to a recent period, was pointed out by Dr. Pilgrim, of the Hudson River State Hospital, in discussing some years ago, a paper read before this conference by Dr. Smith, of the Central Islip State Hospital, on the subject of occupation for the insane. Dr. Pilgrim quoted Benjamin Rush, the pioneer American psychiatrist, showing that as early as 1798 the latter recognized occupation as of value in his work. Dr. Pilgrim, likewise, quoted various reports and records, showing that at intervals during succeeding years the subject has held the attention of those engaged in caring for the insane. But old as the subject is, it is only in recent years that industrial and educational work has assumed a proper relationship to other institutional activities, none of which can be regarded as more important.

In recognizing the fact it is well to consider the reasons underlying it. Dr. Meyer, Emeritus Director of the Psychiatric Institute, illuminated the whole subject when he spoke of dementia præcox in terms of disorganized habits. These patients, forming the bulk of the chronic insane, require then, most of all, habit training which is the aim of all occupational re-education. The insane show a lessened or loss of capacity for normal adjustments and it is but simple logic which leads us to attempt to substitute for faulty reactions, of psychic disorganization, normal reactions, however simple, in the way of profitable activity. Idleness leads to introspection, whereas occupation demands

* Paper read at the quarterly conference, held at Manhattan State Hospital, December, 1911.

attention directed upon outside matters; the insane loss of self-control must be, in a measure at least, overcome in securing creative activity. Use of the hands means at least an elementary activity of the mind, conversely idle minds eventually follow idle hands and it is but a truism to repeat that unused function, psychic as well as material, becomes enfeebled.

In a way it is strange that the paramount importance of the subject has not stimulated us to more constant effort in this direction. Prisoners are no longer allowed to remain in idleness, and among defectives, educational occupation is the great feature of their care. When the same attitude is universally assumed concerning the insane, where indeed the outlook is more hopeful, dealing as we do with defective capacity due to disease rather than to congenital lack, it does not seem a far fetched assumption to believe that thereby the vast numbers of chronic insane now in our hospitals may be reduced and those that remain become in a much greater degree partially self-supporting.

Insane patients in institutions have for many years assisted with the routine work, but such workers have been those who have worked willingly, while those forming the mass of chronic patients, the ones most in need of occupational training, have remained idle, and in many cases noisy and destructive, when by proper teaching their abnormal activity could have been directed into productive channels. There is of course an economic as well as a therapeutic aspect to this work, and, while taken in the aggregate, the economic side is of great importance, yet that will care for itself, if the therapeutic standpoint be sufficiently emphasized. Every idle patient taught to assume however small a niche in the hospital activity is to that extent less of a burden upon the community. One of our greatest difficulties, however, is to sufficiently emphasize the therapeutic standpoint and to make plain the fact that zeal in this direction is as truly medical as zeal in drug or hygienic treatment. We should appreciate that the daily routine of our patients' lives is not something apart, requiring merely casual supervision, but that everything done for

a patient has a medical aspect. Our attitude should be sufficiently broad to eagerly seize every means whatsoever, which promises help to the unfortunates under our care.

But apart from the usual routine work we now find in most hospitals for the insane, occupational classes, the basic purpose of which is re-education. In the Manhattan State Hospital and Kings Park State Hospital, the institutions with which I am most familiar, both kinds of work cover a wide range of activity, this being essential that it may be possible to fit the work to the patients' diminished capacity rather than vice versa. Only thus can we give the patient that sense of completion so often emphasized by Dr. Meyer and the value of which we have all experienced in the satisfaction felt when we have finally completed a task to which we have set ourselves. A sense of accomplishment is one of the greatest incentives to renewed effort with the insane as with the sane. Dr. Smith, in the paper already mentioned, emphasized the necessity of carefully and systematically grading occupation for insane patients, as regards both difficulty and attractiveness. From the practically mechanical picking of hair by a stupid dement to the production of artistic oil paintings is a far cry, but, with many varying capacities, many varying occupations are required that a proper selection, one for the other, may be made, always of course under medical direction.

In beginning a process of re-education or training faculties by use, the means employed must be simple and direct and, so far as possible, stimulating and attractive. It should be begun as soon as the patient is physically able to co-operate and our efforts continued unremittingly. Beginning with the most elementary forms of activity in the more inactive cases it is essential to pass as soon as possible to creative work, always remembering that monotonous toil has a deadening effect and that therapeutic effort calls for occupation rather than heavy labor. Of course success does not always follow and we may then resort to calisthenics, folk dancing, etc., in an endeavor to excite interest. Physical movement to music may be the beginning of later purposeful occupation and indeed the two may often

well go hand in hand. All occupation should, as soon as possible, have a definite object for the patient, and, as for calisthenics, drills, etc., they will be of more value if used as a means to an end, as for the purpose of preparing for an occasional entertainment.

Entertainments in which patients may participate form a valuable method of training and are occasionally the means of first arousing the much desired interest, patients sometimes having been thus induced to work when other means have failed. Recreation should always attend occupation whether in classes or in routine hospital work. Too often is it the case that the tea parties, picnics, etc., enjoyed by our patients are attended by the convalescent and class patients to the exclusion of the so-called chronic workers who are usually employed when such affairs are held. Never should work be an end in itself nor should it assume such a prominence as to deprive thereby patients of pleasure. No matter if employed in routine hospital work slight readjustment will render it unnecessary to seriously disturb the essential routine of the hospital activity. Many chronic patients, who have had no special entertainment for years, show an almost pathetic gratitude at some simple gift or amusement, so grossly out of proportion is it, judged by normal standards. If philanthropists knew the actual situation, through no other channels could they produce an equal amount of human happiness with less expenditure.

The attitude of those directing occupation is all important. The harsh dictatorial manner will never yield results. The patients in a way only reflect their caretakers. The classical, wild, raving maniac was a product of cruel methods of restraint and authority exercised through force. Happily we can now surprise the average layman by the great rarity of such cases and the comparative ease with which such conditions are controlled by modern methods of hydrotherapy, gentle tact, etc., replacing brutal strength. In a like manner patients will reflect their instructors' zeal and earnestness in occupational effort. The personal equation of the instructor, therefore, becomes most important and indeed, in any given instance, the success or failure of special

effort in this line will depend more upon the character of the instructor than upon the character of the patients. It is much easier for an attendant to say that a dull and inactive patient will not work than it is to persist, day by day, endeavoring to induce such a patient to perform a simple task. I well remember about ten years ago when the insane were removed from Blackwell's Island to this Island, and a transfer of working patients from this hospital to up-State hospitals was in turn made to provide room for them, the calamity howlers among the attendants were numerous and vociferous; the good workers having all been sent away, the ordinary work of the hospital could never be accomplished. While at first some difficulty was encountered, yet necessity so stimulated effort that within a comparatively short time where no workers had existed they had been produced. This incident has remained in my mind as proof that occupational instruction is capable of almost indefinite extension, provided only, sufficient, capable and tactful individuals can be secured to carry it on. Instructors are required who will take an active personal interest in each individual case, guiding the patient through the process of re-education as the teacher guides the child.

Many practical difficulties are of course encountered, but they are invariably magnified by the poor instructor and minimized by the good one. Many patients who have absolutely refused or have been incapable of co-operation have, after patient and tactful perseverance, reacted to the efforts made in their behalf. Sometimes there is a definite reason for the patient's lack of co-operation which a skilled instructor will discover and remove. The question has been discussed whether patients should be given work with which they were formerly familiar or work new to them. Experience would seem to show, however, that it is unwise to generalize in this regard, some being first aroused by familiar pursuits and others again first responding to novelties. Results may be obtained in competing with a patient's former work or in competing with fellow patients. Minor products of occupational classes may be used as favors and prizes in competitive games and in table and ward decorations for

special occasions, the producer of the work always receiving due credit. It is apparent, therefore, that the question of arousing primary interest must be determined in each case by the individual reaction. At Kings Park some of the appreciative, as well as the most skilled workers, are male patients employed out of doors. They find contentment and an added incentive to continued work in an allowance of fifty cents per week from the amusement fund, which small sum amply provides for such luxuries as they may desire and which they purchase at the store of the Employees' Club. These patients live in an open door cottage, have a parole of the grounds and form indeed a mild aristocracy among the patients, yet they form a superior class based solely upon conduct, thus furnishing a definite goal to stimulate effort and self-control. The fact that never have we had such a patient abuse the privileges extended shows how highly the honor is valued.

Having emphasized the necessity of skilled specialists in this work it may well be asked how is it practical to carry on such work under present conditions and without prohibitive expense. In this connection our experience at the Kings Park State Hospital may prove interesting. Some time since we had a basket class for men and one for women under the charge, respectively, of an Indian and his wife, who themselves were expert basket-makers. Theoretically they should have been most efficient, but practically much difficulty was experienced with them as teachers of their handicraft. When they finally refused to teach a special line of work because it was "an Indian secret," a change was thought to be necessary. An employee in one of the shops, who had previously relieved the Indian and had showed much interest in the work, was appointed to the latter's position and largely by his own efforts he has made himself much more efficient than his predecessor. In a like manner an ordinary ward attendant, who had done substitute duty with the women's basket class, soon proved her capability, and in brief, with the exception of a physical instructress who conducts our classes in calisthenics, folk dancing, etc., our instructors have all been developed from

the regular force. Through the co-operation of the Commission several positions as special attendants have been allowed for this work and, it being known that promotion depends upon competency, we have succeeded in developing considerable rivalry, not only among the members but between the instructors of the different classes.

The importance of grading occupational work, as mentioned, being early recognized we sought a supervising head who could co-ordinate all the varied activities in our industrial and educational classes. We found that Miss Marker, our superintendent of nurses, had shown great interest in the work and without extra compensation she readily agreed to assume supervision of it. With the co-operation again of the Commission she was enabled to take a summer course, relating to handicraft and occupational activity, in the New York School of Philanthropy. She rapidly developed unusual zeal and efficiency and through her efforts we have been able to constantly extend the scope of our work until now she has a general supervision over four physical culture classes, a fancy work class, four basketry classes, a class in artificial flower-making, a class in both oil and water color painting, one in stenciling, two in pierced brass work, a day school and a certain amount of work in book-binding and rug weaving, and the fact, as stated, that the individual instructors in all of the above classes with a single exception were drawn from our ordinary working force proves that, with the inculcation of a proper spirit of zeal and effort, conscientious and capable instructors can be produced. In a measure this seems to have been aided by the fact that in all instances the regular instructors are expected to teach other employees as well as the patients. Not only must there be competent reliefs provided in case of absences, but regular ward attendants and nurses are expected to develop this work, so far as possible, upon the wards in addition to the class work.

While at Kings Park we thus have our occupational classes fairly well systematized and co-ordinated, yet, as in most hospitals, the various outside working parties, coming as they do from various services, have not so been brought to-

gether. Dr. Macy has planned, however, to thoroughly co-ordinate and systematize this part of our hospital activity before the spring work begins. It is proposed to put all patients engaged in routine hospital work under the general supervision of an assistant physician, who, being relieved of a portion of his other duties, will be able to devote sufficient time to further develop and co-ordinate such occupations. And if the results meet with our anticipation it is proposed to eventually ask the Commission for one or two special attendants to act as instructors in this department, so that our entire outdoor working department may be put upon an educational basis.

Referring again to our occupational classes it may be said that, aside from salaries and materials purchased for the fancy work class, the work is carried on without expense to the State, as the sale of finished products furnishes a fund which can be constantly turned over to purchase new supplies. A patient, a carpenter by trade, was induced to build a large show case which, standing at the main entrance to the general office, is seen by all visitors and here there being displayed fancy work, paintings, drawings, baskets, artificial flowers, brass work, etc., so many sales are made that it is with difficulty that a show stock can be kept on hand. As, however, certain products have a more ready sale than others, an occasional sale is held in the Employees' Club House, one this month producing receipts of over \$30. Friends and relatives of patients are interested and of course are our most liberal patrons. In special cases, however, patients who have accomplished some special bit of work, of which they are proud, are allowed to make their friends a gift of the product. As the fund allows, small sums are spent to purchase articles desired by those who have shown the most improvement in their work or who for other reasons it is deemed wise to reward. It is perhaps needless to add that any system of rewards must be exercised with care and judgment and it is only used as a means to stimulate renewed effort.

The materials used in our embroidery class are purchased by the State, as the fancy articles, consisting of drawn

work, center pieces, cushion tops, etc., are issued to various wards and living apartments, but the funds furnished by sales of other class products are sufficient not only to be devoted to the uses mentioned, but special china has been purchased for afternoon teas, a number of books relating to educational occupations have been purchased and we have been able to constantly retain a surplus fund for emergencies.

Not only has our superintendent of nurses been actively engaged in instructing the teachers of the various activities mentioned, but we have made use of various patients possessing special talent; for instance, the art class is directed by a woman patient, who, formerly an artist, states that her happiest hours in the hospital have been spent, again working at her easel and in teaching others the beauty of art. Objecting to the sale of paintings of her own creation, she is allowed to make gifts of them, but she has no objection to the sale of such of her work as are copies. One such copy in oil, however, recently sold for five dollars, so that it may be seen her contributions to the fund are by no means small. The artificial flower work was likewise started by using a patient as the original instructor, and the same may be said as to book binding and rug weaving. Since starting the artificial flower work a second patient, skilled in this form of handicraft, has been admitted to the hospital and with two patients, instructors to teach both attendants and fellow patients, the work has been extended so that it is now a ward occupation on several female wards, special effort being made at this time to increase the product, as it is much used for ward decorations for the holidays. These workers are allowed a portion of the flowers produced to be used as personal adornments and needless to say this acts as a marked incentive. While book binding and rug weaving are as yet not extensively developed, the work in the book bindery has been valuable from an economical standpoint in prolonging the lives of numerous books in the patients' library which would have otherwise been condemned, while the patient directing the technical part of the work has shown steady improvement. Our

first rug weaving was undertaken by a convalescent patient who had been familiar with such work before her marriage. As her convalescence progressed she instructed several fellow patients in the work and showed much skill in devising original patterns. Prior to her discharge she spontaneously remarked that teaching the other patients had so taken her mind from herself that she felt that it had much to do with her recovery.

Our physical instructress conducts four different classes, being assisted with each of them by ward nurses. Each class is given exercises in marching, running, wand drills, folk dancing and various games with the basket ball. The wand drills and basket ball games are particularly popular with the men, while with the women games with light weight bean bags are more popular. Whenever the weather permits these classes are conducted out of doors. The special attendant in charge of these classes likewise supervises and plans entertainments by selected patients, which are given in the amusement hall during the winter months.

Our day school for women patients is in charge of a full time special attendant, although for a considerable period she willingly conducted the school as an ordinary attendant, it being possible to give her extra compensation as a member of the hospital orchestra. The usual elementary branches are taught. In addition instruction is given in drawing, parquetry, school singing and light calisthenics. Occasionally refreshments are served when other patients in the building are invited. It may be added that not only the school but the different classes are also allowed to give occasional teas, and in the summer, picnics, to which they invite their friends from other wards, thus in every way emphasizing the advantage of belonging to these classes.

As after all, this like other work must be tested by results, I will briefly refer to the manner in which convalescent or recovered patients regard it. One elderly man, whose physical health rendered it impossible for him to be employed after leaving the hospital, so enjoyed his basket-making that he wrote for addresses of firms, supplying the goods, that he might continue it at home. The physical

exercises seem to be especially appreciated by male patients and several have written from their homes since their recovery that they attribute their first improvement to the physical culture class. As to concrete cases I will briefly cite a few which are fairly typical:

One patient, S. P., was so helpless as to be unable to dress or undress herself, was practically mute and only ate on urging. Repeated efforts to induce her to engage in basketry were failures. As customary, when one form of occupation fails to interest, she was then tried with another, this time pierced brass work being selected. This seemed to interest her from the start, although she continued indifferent unless it was placed in her hands and she was carefully directed how to proceed. None the less, co-operation finally being secured she was taught to complete a few simple designs and is now progressing in ability with corresponding improvement in her general condition. She has completed a few simple articles and has now been induced to attempt basket-making; she is now able to dress herself, gets her work on entering the class room, puts it away and carries on simple conversation.

Another case which could easily have been dismissed as having been incapable of instruction was Mrs. M., who, when taken to the basket class, sat mute and apathetic, constantly picked at her face which was covered with small abrasions. When given a basket to work upon she twisted up the material and dropped it to the floor. She was, however, allowed to sit with the industrious patients day after day for several weeks, meanwhile being urged to participate in the work. No results were obtained, however, until it was suggested to her that she make a small basket as a gift for her child at home; she then first began to manifest interest, complied with directions and has since completed several baskets of unique design for her children, this thought seeming to stimulate her first effort. Her physical condition induced us to also enter her in the physical culture class, but she soon began to complain that it kept her from the basketry. That her interest might be constantly stimulated she was further taught stenciling and she

has since become interested in the rug weaving with a loom. We now have no more industrious patient—she draws original designs for stenciling and weaving and what is still more encouraging is helping other patients to start the work.

Another patient, E. W., was invited into the basketry class by another patient last June. She was idle, apathetic and untidy, sat idly with the raffia in her hand, giving it no heed. After about one week, however, she was induced to sort waste raffia and tie it in small bundles for making raffia rope. She became a member of the physical culture class, which at this time was holding sessions in the exercise grove. Gradually improving, both mentally and physically, it has only been during the past month that she has begun to talk to the other patients and actually accomplishes creative work, which still is of the simplest sort, she merely making raffia rope. She has been observed, however, watching other patients doing punched brass work and she has, therefore, recently been given material for such work; she has, however, failed to follow the designs, but, as she has had only a few days trial at it, we confidently expect to obtain more decided improvement in her creative ability.

A Mrs. H., both suicidal and resistive, was for a long time not put in the occupational classes for fear that she would cause a disturbance; she was constantly watching at the door in an effort to elope and although, it must be admitted, we thought that there was little chance of improving her condition by occupation the trial was made. At first somewhat less restless and decidedly less troublesome than on the ward she went for a few days without doing any work but she then began to assist with the basketry on the promise that whatever she made she could present to her friends and relatives. At present she is orderly, no longer tries to elope and frequently protests at the close of the class hour, desiring to work longer, and frequently is work taken voluntarily from the class room, to be engaged in, upon the wards.

Another notable case was R. S., who was extremely de-

pressed, suicidal and almost constantly in tears. It took several days to interest her in basket work, but eventually a certain amount of interest was aroused and from the beginning she showed unusual ability in the work. Rapidly becoming adept she is now likewise engaged in pierced brass work, is a member of the physical culture class, has done some weaving and is a member of the drills and dances given at the patients' entertainments. She is now cheerful, often singing at her work, and, while possibly a chronic mental case, she enjoys her life and instead of a burden she is a useful member of the hospital community.

While one thus sees that we can not expect recoveries in all cases, it would seem no less an important aim to reduce, so far as possible, the number of helpless cases in an institution. In so far as occupational training prevents general dilapidation and renders patients even partially self-supporting, in so far does occupation render less heavy the burden of their maintenance.

To briefly summarize general conclusions it may be stated that:

(1) The therapeutic value of occupation for the insane is axiomatic and is based upon sound psychological laws.

(2) Former haphazard occupations should be replaced by graded, systematized plans of work under a co-ordinating head.

(3) Occupational re-education, as emphasized in special classes, should likewise be a feature of ordinary routine hospital work.

(4) The supervision of occupational re-education is distinctly medical work.

(5) The form of occupation should be adapted to patient's capacity, should not be monotonous, and, so far as possible, should be creative.

(6) Successful re-education means primary interest, and to induce this, methods must be flexible and vary with the individual.

(7) Recreation should accompany occupation, the latter never being regarded as an end in itself.

(8) Success of work depends more upon character of instructors than character of patients.

(9) Despite necessity of trained specialists for occupational instruction, with inculcation of proper spirit, it is possible to develop most of them from the regular force of a hospital.

(10) Special occupational classes require no expensive equipment and can be made practically self-supporting.

(11) While the New York State Hospitals are doing more than ever before in occupational training, it is possible to still further extend the work by using attendants as assistants to regular instructors and introducing occupational training as ward work.

(12) While many cases are incurable, despite any form of treatment, the industrious are thereby less burdensome and lead happier lives.

(13) Occupation for insane patients has great economic value, but this must ever remain subsidiary to the therapeutic aspect.

A STUDY OF THE CLINICAL MANIFESTATIONS OF CEREBRAL SYPHILIS.*

(REPORT OF TWELVE CASES WITH AUTOPSY
AND FOUR CLINICAL CASES.)

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The object of this paper is to present for consideration the clinical aspects of a few cases of luetic insanity in order to see if there are any deductions that can be drawn from a purely clinical standpoint in the differentiation of this process from that of general paresis, and the other condition with which it is often confounded, namely, general arteriosclerosis. As the cases are few in number I realize at the start that it would not be safe to draw any definite conclusions, but it may be that we will find a few points that might be emphasized in diagnosing this trouble from the former (general paresis), but I feel that there are many cases of syphilitic insanity of the arteriosclerotic type, especially those occurring in advanced years, which can not be differentiated clinically from general arteriosclerosis. It is hoped that a more detailed study can be made of the new admissions of this type and that a more complete review of a larger number of cases may be made at some future time.

Since I selected the subject of which this paper treats, I have reviewed the histories, course, and outcome of several cases of insanity in which the diagnosis was questionable. This review, together with the reports received from the Psychiatric Institute of the cases sent there, has impressed upon me very forcibly the great and important part which syphilis plays in the causation of organic disease of the central nervous system. This fact is also brought out very plainly in Dr. Lambert's article† on the "Regressive and Progressive Forms of Arteriosclerosis," in which he reported

* Paper read at the inter-hospital meeting, held at Hudson River State Hospital, June 15 and 16, 1911.

† STATE HOSPITALS BULLETIN, December, 1910.

that, while a detailed study of the cerebral arteries was not made in all the cases of supposed arteriosclerosis received at the Institute during a certain period, there were twenty out of forty-eight examined which were found to be of a syphilitic nature. While it is not likely that any one agrees with Berkley that luetic insanity is quite as frequent or even more common than general paresis and tabes dorsalis, it is probably more frequently met with than the statistics of Clouston would lead one to believe. He found in over three thousand cases of mental alienation from all classes of society only sixteen that could be attributed to this infection.

The cases I have to report number sixteen and all of these have been admitted since 1902 with the exception of an isolated case received in 1897. In all probability these do not represent, even approximately, the actual number of syphilitic psychoses in the institution during this period. If all of our obscure cases had come to autopsy, and especially if the exact etiological factor could have been obtained in those cases looked upon as general arteriosclerosis, I would no doubt be in a position to add several others to the sixteen cases I am about to report upon. Of this number the first twelve have come to autopsy and were examined anatomically at the Psychiatric Institute.* Eleven of these were verified as specific, or probably specific, in character, while in the other one the diagnosis was too questionable to be included in this group. The difficulty in clinically diagnosing these cases is very evident from a study of the cases here reviewed. Only two of the twelve were correctly diagnosed, but four others, microscopically considered to be syphilitic arteriosclerotic subjects, were recognized clinically as cases of general arteriosclerosis. The last four cases have not been autopsied but they appear to present sufficiently clear clinical pictures to warrant including them in this group.

CASE I. I. C. Admitted in 1904. Died at the end of six years. Age 54; single; male; of moderate habits; was bright, healthy, and industrious until an apoplectic attack five years before admission and five years after he had contracted syphilis. He improved and was

* The descriptions of the anatomical findings are furnished by the Psychiatric Institute.

walking about, ten days after the attack, but there was paresis of the left side and he was always inefficient thereafter. He gradually became rather feeble-minded, careless, and restless. There were no delusions or hallucinations, but his memory was poor for recent events. Confusion and disorientation were absent. In this case some mental deterioration was present without any great change in the personality, *i. e.*, the patient while showing a certain simple-mindedness and superficial talk, took an interest in his surroundings, adapted himself well, and retained a fairly good general grasp. He had insight. Physically he had headaches, some defects in smell and taste, unsteady gait, Romberg symptom, residuals of left hemiplegia, brisk knee-jerks, arteriosclerosis, tremors and insomnia. The right pupil was irregular and reacted slowly to light at first; later, reaction was normal. Left pupil normal. General convulsions set in during the latter part of the disease. No defects in speech or writing. No results from antisyphilitic treatment.

Clinical diagnosis: Cerebral syphilis.

Postmortem findings: The brain was rather large, somewhat swollen and slightly distorted in appearance. An old hemorrhagic pachymeningitis compressed the lateral aspect of the right frontal lobe. The pia over the convexity and base of the brain was turbid looking and quite tough. The cerebral arteries were diffusely thickened. A few granulations were seen on the floor of the fourth ventricle. The cranial nerves were free from significant adhesions. The pia of the cord was moderately hazy. Horizontal sections were made through the brain and revealed several small foci of softening in the basal nuclei; one old focus cut into the middle of the right internal capsule, two others were present in the right lenticular nucleus; in the left hemisphere two old foci were found in the lenticular nucleus. Microscopically, the pia over the convexity contained a few lymphoid and occasional plasma cells; over the lateral convexity, and particularly over the base, the infiltration was extreme. The cortex and cortical vessels were essentially normal over the convexity, but mesially and laterally in the insular cortex and in the medulla oblongata and cord, the vessels contained a considerable number of lymphoid and plasma cells. The cerebral arteries showed a high grade syphilitic endarteritis and periarteritis.

Anatomical diagnosis: Subacute and chronic syphilitic meningitis and endarteritis with multiple medullary softenings.

CASE II. M. K. A married Polish woman of 19, about whom nothing was known previous to her landing in this country sixteen months before, was admitted with a syphilitic history (at time of landing had an eruption on her body, complained of sore throat and had initial lesion). She had used no liquor. Headaches and defective vision had been present for six months before commitment, and for three months before the birth of her only child. She grew worse after parturition. There were violent outbreaks during which she

abused her child, destroyed clothing, and talked to herself in response to hallucinations of sight and hearing. Upon admission and throughout her stay at the hospital she was more composed, but very depressed and at times somewhat excited and restless without agitation. She constantly referred to her severe headaches. She did not understand English, but it was learned through an interpreter that her speech was coherent and rational. Owing to the fact that she was admitted in 1902, the case was not fully worked up, but no record was found of any delusions, though as above stated she is said to have had hallucinations before admission. Considering her full appreciation of her condition it would seem fair to assume that she was not confused, at least to any great extent. Physically there were tottering gait, unequal pupils which reacted promptly, *right homonymous hemianopsia*, vertigo, severe and almost constant headaches, tremors, general convulsions, albuminuria without casts, and normal speech. Sample of writing not recorded.

Clinical diagnosis: Cerebral syphilis or brain tumor. *Anatomically* it was found to be one of brain syphilis of the gummatous type with softening of the left cuneus.

CASE III. E. W. This patient, age 45, American, was admitted March 4, 1910, as a voluntary case. Died after eight months. A bank cashier, married twice, the father of one child by his second wife. He was a steady user of liquor and tobacco, but never became intoxicated. No history of syphilis was obtained. At the time of the death of his first wife in 1904, he suffered from a mental breakdown, became morose and was away from his business for a year. He then took a position with less responsibility and rendered fairly satisfactory services until 1907. In August, 1907, while out in his automobile, he had a slight shock. He complained of weakness in his right arm and it was noticed that his speech was somewhat thick. He now began to lose control of himself, grew nervous and irritable, and made frequent errors in his business. In March, 1908, his speech became more defective. He was confused at times and displayed an increasing lack of interest in everything. In September, 1908, he was treated at a sanitarium and at that time was quite helpless.

On admission, the patient was fairly well oriented and understood the situation, but he thought it was 1900 instead of 1910; his memory and retention were defective and his statements showed some discrepancies, his calculation was poor; but he had some insight as regards his defect; his train of thought was not disordered; he was emotional, cried easily, and at times was irritable and fault finding; hallucinations were absent and he expressed no delusions, except that his family was neglecting him, which was not true. The physical examination showed unequal pupils but prompt reaction to light and accommodation; there was weakness of the left arm and leg, and exaggerated deep reflexes with ankle clonus on that side; speech difficult to understand, low, indistinct and slurring;

writing had no omissions, but the individual letters were poorly written; limitation of visual field; an examination of the fundi showed atrophy of both optic discs; positive Wassermann in cerebrospinal fluid, negative in blood; lumbar puncture showed from 15 to 27 cells per field.

The patient failed gradually until he finally became bedridden and untidy in his habits.

Clinical diagnosis: Arteriosclerotic insanity.

Anatomical examination: The brain was large, with a thick partially opaque pia. The large blood vessels were markedly atheromatous; granulations were not found either grossly or microscopically. Small foci of softening were present in the right optic thalamus and in the sagittal marrow.

Microscopically, the pia of the cortex was thickened and in places quite cellular, but lymphoid cells were usually scattered, and it was doubtful whether they constituted a true exudate anywhere. The pia of the medulla oblongata contained few lymphoid cells. The small blood vessels were thickened; the larger ones frequently showed thickening of the intima which usually seemed poorly organized, and, although it girdled the vessel, it was of slight thickness in most places. The largest vessels were, as a rule, completely girdled, but the intimal tissues presented extensive atheromatous changes, and seemed in general poorly nourished. The media was often involved; the elastic membrane was split or fractured. The adventitia often contained a number of small dark cells, especially where degeneration in the intima and media was greatest.

The changes in themselves could not be definitely pronounced to be specific, but since there was a positive lumbar puncture and a Wassermann reaction in the spinal fluid, the case was classed with those *probably* of syphilitic origin.

CASE IV. G. L. A male, 64 years old, born in this country of German parents, was admitted April 8, 1909. Died two months later. The mother died of tuberculosis. A sister was feeble-minded. Patient was a sober, industrious man, attending strictly to his business until he began to drink. It is not known exactly when this was, but it is said to have been excessive and long continued. Business reverses through bad influences, and later the onset of convulsions, resulted in his ruination. About three years before admission he had his first fit. Subsequently the attacks occurred at any time during the day or night. Sometimes they were light, ending with one attack; then again they occurred in series which were followed by marked mental clouding and violent outbreaks. About eighteen months before admission he was considered insane. At that time he became restless and confused. He constantly wandered away from home and became violent when an effort was made to return him. He saw horses in his room and imagined he was driving them. At the hospital little co-operation was obtained. His actions were simple,

silly, and to no purpose. He talked much, but his utterances were mostly disconnected and incoherent. It was ascertained, however, that he had no grasp on the situation and was completely disoriented.

Physical examination showed an undersized man of 64, presenting anatomical stigmata of degeneracy, impaired nutrition, exaggerated deep reflexes, stammering speech, normal pupils, weak muscular strength, Romberg swaying, unsteady gait, hardened arteries, epileptiform convulsions. Writing not obtained; albuminuria without casts; positive lumbar puncture (8-20 lymphocytes per field); increased albumin.

Clinical diagnosis: Arteriosclerotic insanity.

Anatomical examination: The brain was of medium size, the pia thick and milky looking. A subcortical softening was found undermining the left parieto-occipital region, and another slit-like softening was present, involving the apposed edges of the fusiform and lingual gyri.

The large blood vessels were diffusely thickened and contained intimal plaques which were usually atheromatous; occasionally, but not often, there was moderate intimal girdling. A few dark cells found in the adventitia were thought to be within normal limits. In those medium sized vessels, connected with the lesion, the walls were thickened, often much degenerated, with a retracted lumen surrounded by an intimal ring which was separated from the rest of the vessel wall by a space which usually contained some loose gauzy tissue. Occasionally lymphoid cells were scattered about such vessels. The pia in general was likely to contain a scattered sprinkling of lymphoid cells with occasional cells resembling plasma cells, but not positively identified as such.

On the above inconclusive evidence, and the presence of a positive lymphocytosis of the spinal fluid during life, the case was classed among those possibly specific.

CASE V. O. B. Admitted March 2, 1897. Died after a residence of eleven and one-half years in the hospital. A man, single, age 34, barber by occupation, born in this country. Intemperate. For nine months he had done no work, owing to ill health. He was sentenced for two months for theft and, upon his release, he showed signs of alienation. He talked to himself, was irritable, fault finding, and soon began to express ideas of persecution. He thought his family and his physicians were trying to poison him. As a result of these ideas he threatened his father with an axe. Hallucinations soon developed. On admission he was confused, depressed, and tremulous. His delusions and hallucinations became more pronounced. In addition to ideas of ill-treatment he had hypochondriacal notions and, rarely, delusions of wealth. There was a slowly increasing dementia, reaching a very high degree. Owing to the fact that he was admitted so many years ago (1897), no complete physical examination was made at that time, but in 1906, his pupils were noted to be round, the

left larger than the right, and both to react to light to a limited extent. October 20, 1908, pupils were equal and immobile to light. Reaction to accommodation not obtained (too demented). His expression was apathetic and vacant; organic reflexes uncontrolled. There was great reduction in muscular strength, tremors of tongue, facial muscles, and hands, and his speech was a stammering inarticulate jargon. Writing not recorded.

Clinically the case was considered one of general paresis. The *anatomical* examination showed: The brain was of median size, the pia slightly thickened over the convexity and base. The convolutions were moderately full. The cranial vessels were free from adhesions; a few small granulations were seen on the floor of the fourth ventricle. The larger cerebral arteries were slightly but diffusely thickened. Microscopically lymphoid, plasma and mast cells were found in the pia but no diffuse infiltration of the cortical vessel sheaths; occasional mast cells were seen in the latter, also a slight degree of endothelial proliferation, changes seen in certain cases presumably syphilitic.

Anatomical diagnosis: Chronic syphilitic meningitis and endarteritis.

CASE VI. W. J. Admitted May 6, 1909. Died after ten months' residence. Man, age 82, born in England. Temperate. Married and had two daughters living. Some time before admission (date not given) patient had an apoplectic attack, resulting in right-sided hemiplegia and defective speech. Improved, but never worked thereafter. Two light attacks three years later. Last attack was seven months before admission, involving the right side of the body, and was followed by mental disturbance. He became depressed, talked of suicide, and was threatening, fault finding, irritable, apprehensive, and violent. At the hospital he was usually quiet, contented, but again nervous, excitable, and he cried easily. His talk was voluble, rambling, and largely unintelligible and paraphasic, and his speech stammering. He appeared wholly disoriented. He could not be made to read or write. The physical examination showed at the time of his admission poor nutrition, general feebleness, with infirm musculature; headaches; impaired smell and taste sense; unequal pupils, the right being the larger with some opacity of the lens, but both reacted to light and distance; defective hearing; brisk knee-jerks; Romberg swaying; tremors; thickened arteries; residuals of a right-sided hemiplegia. After the initial examination he developed a gradually increasing paralysis of the left side.

Clinical diagnosis: Post-apoplectic insanity.

Anatomical examination: The brain was of medium size. There was a thick pad of hemorrhagic pachymeningitis on the right. The blood vessels were thickened diffusely and were also atheromatous. There were fresh softenings involving the left supra-marginal gyrus, and in part the angular gyrus with marked thickening of the vessels

in this area: on the right the superior parietal lobule felt soft. Massive infiltrates were found in the pia, especially over the softened areas, with endarteritis in many of the vessels, and sometimes rechannellization. Thrombosis was also present in some vessels. In the cortex a small vessel alteration, believed to correspond to that described by Nissl as syphilitic, was found. In the largest blood vessels examined a girdling endarteritis was usually present with numerous cells in the adjacent pia, but as a rule not in the adventitia proper of the vessels. The changes were thought to be of syphilitic origin.

CASE VII. R. H. Admitted as a voluntary case May 15, 1910. Died ten days later. Patient was 22 years of age, healthy, cheerful, but without serious aims in life. Common school education. Married. He worked in a grocery store for a time and later as an electrician. His habits were good. His father was an alcoholic. May 10, 1910, patient was found in a "convulsive state." Following this he was noisy, restless, and so excited that it took four men to control him. Was quiet during the night after a hypodermic injection. In the morning he was conscious, complained of headache, and spoke rather incoherently. Photophobia was prominent. He became disagreeable, irritable, magnified trifles, and appeared conceited and boastful. At the hospital he was at first considerably excited, talkative and active; later more composed, but petulant, sighed often, exaggerated his complaints and made frequent requests. He was not sociable. No delusions or hallucinations. He felt tired and had pains in his head and eyes. Good memory and orientation, fair answers to questions on general information, calculation prompt and accurate. He thought he was not insane though he realized his physical state. The notes show that for only a day or two following admission he was disoriented for time and place. His mood varied. At times he was cross and irritable, but generally petulant, whining and smiling at the same time. Five days after admission he said he had felt perfectly well until two weeks before coming to the hospital when he began to have headaches. He also stated that he fainted one day and then had struggled violently, and that following the attack he did not remember anything for six days. Physically patient was well developed, and with the exception of absence of corneal reflexes presented no neurological findings.

After a few days' stay at the hospital his photophobia improved and he appeared more comfortable. He died suddenly from cerebral hemorrhage.

Clinically the case was considered as a psychosis due to cerebral hemorrhage.

Anatomically: The brain was rather large and swollen, especially the right hemisphere, the convolutions of which were somewhat flattened over the frontal pole. A pearsized and shaped blood clot was present in the centrum semiovale of the right hemisphere, its apex directed

toward the basal nuclei, its base toward the frontal pole: a ruptured aneurysm one centimeter in diameter was found in the first part of the right middle cerebral artery. Microscopically, the basal arteries showed a low grade endarteritis obliterans of a syphilitic character; the pia was infiltrated with lymphoid and a few plasma cells; the vessels of the cortex were essentially negative.

Anatomical diagnosis: Right middle cerebral aneurysm with rupture and hemorrhage; syphilitic endarteritis and meningitis.

CASE VIII. E. S. Widow, age 59. admitted May 4, 1906. She died three and three-quarter years later. The patient had not been well for two years, during which time she complained of pains in her head, stomach and abdomen. She did not sleep well and gradually became nervous and restless. At the hospital she was untidy, depressed, hypochondriacal, and slightly apprehensive. Complained of being "muddled in her head." She was coherent in her talk and realized that there had been a change; knew she had been married but could not tell whether she had any brothers or sisters. She had forgotten her address and was disoriented. No hallucinations, but she expressed vague ideas of ill-treatment and delusions of a somatic nature. She refused to write. One year after admission she was approximately oriented and knew the name of her charge nurse. Physically there were subjective complaints of headache and vertigo. The pupils were contracted and did not react to light and accommodation; hearing impaired; general pain sense diminished, weak hand grips, ataxic gait, brisk deep reflexes, tremors, and arteriosclerosis. For particular popularity she said, (1st) "Par--par--pop--pop--ity." (2d) "Pa--pa--tie--pop--ty." (3d) "Pop--pop--poppy." Sample of writing not obtained. Three years after admission she had a convulsive attack without residuals.

Clinical diagnosis: General paresis. The *anatomical* examination showed: the brain was small, and the pia was only slightly thickened. The vessels were gray and moderately thickened. No ependymal granulations were found. A fresh hemorrhage lay deep beneath the cortex of the left superior parietal lobule; there were small slits and foci of softening in the basal nuclei.

Microscopically, the pia, which was quite cellular, contained in places foci of very dark lymphoid cells. The vessel walls stained poorly as a rule; the elastica in the larger ones often consisted of several layers, although the ring of intimal thickening was usually rather narrow. The adventitia contained in places an excess of small round cells, either scattered or more in patches.

The case was considered to be probably syphilitic but not certainly so.

CASE IX. B. H. Admitted February 6, 1908. Died in six months' time. Age 65, native born. The patient was exceptionally bright and a good speaker and writer. Married but had no children. He always drank a good deal and indulged in sexual excesses, but it was

not known that he contracted any venereal disease. Six years before admission he was taken ill with what was called "gastro-hepatic trouble"; was never considered well thereafter. From this time on he drank periodically, and after each debauch complained of severe headaches and poor eyesight. He also worried considerably over financial embarrassment. For a year before admission he had been feeble and in the spring of 1907 he was confined in bed with "nephritis." Following this he was in bed frequently and unable to do any work. In November, 1907, his condition became worse and mental symptoms developed. He was restless, noisy, irritable, though there were times when he was more agreeable. Occasionally he was so confused that he did not recognize those about him, did many irrational things, and showed some incoherence in speech. In December, 1907, it was noticed that he dragged his left toe in walking.

At the hospital there was little change. Occasionally he laughed and appeared good natured, while at other times he was quite surly. Confined to his bed constantly and spoon-fed. Questionable hallucinations. Talk voluble with a few expansive ideas (worth \$100,000, had 75 horses). He was disoriented for time and place and showed a general impairment of mental faculties with poor memory, retention, and occasional irrelevancy and incoherence in speech. Physically he was poorly nourished, with chronic conjunctivitis. His pupillary reactions were normal. He showed right homonymous hemianopsia, decreased general pain sense, weak grips, ataxia in legs, tremors, marked arterial thickening, and nephritis. Normal speech and writing. About three months after admission he had convulsive movements of all the limbs followed by a semi-conscious condition for the remainder of the day. He was also subject to attacks in which he would be in a state of coma for several minutes at a time. Toward the last there were external strabismus of the right eye and a partial left hemiplegia.

Anatomical findings: The brain showed a slightly atrophic condition of the posterior two-thirds of L. T₁, and rather marked compression of the superior and lateral convexity of the right hemisphere between the occipital and prefrontal regions. Subcortical hemorrhages several centimeters in diameter were present in the marrow of both hemispheres, particularly the left. In the left hemisphere the blood clot extended backward from the lenticular nucleus into the occipital lobe marrow; in the right hemisphere the blood clot was about similar in distribution but less in extent. The third pair of cranial nerves were bound down to the adjacent tissues by adhesions. The cerebral arteries contained numerous plaques of atheromatous degeneration, microscopically.

Anatomical diagnosis: Arteriosclerosis, syphilitic; bilateral cerebral hemorrhages, pachymeningitis hemorrhagica.

CASE X. A. M. Admitted March 28, 1902, and was in continuous confinement for nearly nine years before his death.

Family history negative.

Patient was born in this country of German parents, attended common school and later became a collar cutter. He smoked moderately, but used no liquor. Contracted syphilis ten years before admission, but was pronounced cured before marriage. However, he had no children. For six months before admission he complained of headaches and insomnia. He then became restless and neglected his work. At times he was absent-minded and confused. He charged his wife with infidelity, and evidenced delusions of persecution. His memory gradually failed. He was low spirited and at times apprehensive and thought people were after him. He often gesticulated to these imaginary people. On admission he was confused, but submitted passively to the admission routine. The records show that patient had no grasp on the situation, was unconcerned about his surroundings, and occasionally showed some excitement with impulsive and destructive tendencies. There were few hallucinations. He became very much deteriorated, mute, and uncleanly in his habits. On admission it was recorded that his speech was slow, hesitating, and that he did not pronounce properly. No sample of writing given. As he died rather suddenly no physical examination was made during the latter stages.

Diagnosis on admission (1902) was acute melancholia. *Microscopical* findings showed the case to be one of cerebral syphilis of the meningeal type.

CASE XI. J. O. Admitted to Manhattan State Hospital June 20, 1908, and afterwards was transferred to the Hudson River State Hospital. Died one year and three months after admission.

A fairly reliable history was obtained from patient. He was native born, age 48, able to read and write, and learned the trade of painting and paper hanging. He was always careful with the use of lead and never had any symptoms of poisoning. Habits moderate. Twenty-five years before admission, he had a sore on his penis and a large scar remained, but his physicians said it was not syphilis. There were no secondaries. Married and had two children. His wife had no miscarriages. They had been separated for eight or ten years, owing to domestic trouble.

A year before admission he became upset because his wife applied for a separation. Besides work was slack and his finances low. He grew gloomy and imagined he had numerous bodily troubles. He had pains in his side, his stomach was upset and his head ached. Piles, heart trouble, and difficult breathing were also mentioned. He became more nervous, restless, and once accused a stranger of poisoning him.

Upon admission to the Manhattan State Hospital he was gloomy and discouraged. He rubbed his hands, looked about in a suspicious manner, and was unable to keep quiet. His mind was not clouded, he knew his surroundings, calculated quickly, and showed a good memory. There were no hallucinations, but he had many delusional

ideas about his physical condition. He was somewhat suspicious and apprehensive. He feared the bottles used to test his smell were poison, and insisted that the blood pressure apparatus had a bad effect upon his breathing. He also had ideas of food poisoning though these were not very prominent. Physically the pupils were slightly irregular, but the reaction was good. Speech normal, writing tremulous, but not distorted, reflexes normal, arteries thickened, and blood pressure 140. After a three months' stay there was some improvement mentally and considerable gain in weight.

After his transfer to the Hudson River State Hospital in February, 1909, he was idle, sluggish and gloomy. His hypochondriacal notions stood out plainly and largely dominated his trend of thought. A physical examination in June, 1909, disclosed equal pupils, with normal reactions, brisk knee-jerks; weak, unsteady gait with pronounced Romberg swaying, fibrillary tremors of tongue and fingers, weak hand grips, the left appearing the stronger, and some trouble with test phrases (actual defects not recorded). The patient failed gradually during the summer, became helpless, bedridden, and uncleanly in his habits.

At time of admission the *clinical diagnosis* was an undifferentiated depression with a paranoid trend; at death, general paresis.

Anatomical findings: The brain was of moderate size, the pia slightly thickened over the convexity, less so over the base. There was a slight degree of atrophy of the convolutions but this was not marked, no granulations were seen on the floor of the fourth ventricle. The larger blood vessels did not appear thickened. A small number of lymphoid and mast cells were found in the pia but no undoubted plasma cells; there was also a moderate amount of pigment in and about the cortical vessels. The vessels were thickened, except in the medulla and cord where there was proliferation, particularly of the intima in the smaller vessels; lymphoid cells were also common here and an occasional plasma cell was seen. A "combined sclerosis" involving the posterior columns, the direct cerebellar tracts and pyramidal tracts, was demonstrable in the first cervical segment, the only portion of the cord received.

Anatomical diagnosis: Chronic meningitis (syphilitic?) "combined sclerosis" of cord.

CASE XII. L. C. Admitted June 27, 1910; was in the hospital 17 days before death. Duration of psychosis 20 days. The patient was a colored man, 27 years old, single. He is said to have been intemperate in the use of alcohol, cocaine and tobacco. Three days before admission he was taken suddenly ill with an occupation delirium. He imagined he was driving horses, talked and shouted to them and objected to all interferences. He was found at police headquarters in a disheveled condition. On his way to the hospital he was noisy, restless, kicked at the attendants, spit at those about him, and tried to tear off his clothing. On admission he was extremely noisy, held

himself rigid, with eyes and hands tightly closed, and struggled so that it was impossible to take his weight. During the early part of his stay here he was so restless that part of the time it was necessary to have him closely watched lest he throw himself out of bed. Quieted down somewhat in the continuous bath. At times he held his fingers out straight, with tips approximated and was very awkward in his movements. At other times he would throw his head back and assume a position of partial opisthotonos, working his arms and legs. This appeared to be voluntary. He frequently called out and repeated over and over again, often as many as 25 to 30 times, such phrases as "put it on my hand," or "put it in my mouth." One day he gave his name correctly and said he did not know where he was, then his answers became irrelevant, for example, when asked, "What do you see now?" he said, "Trying to get rich." After the height of the excitement he appeared stuporous with low mutterings. Physically patient was emaciated, presenting a delirious condition and signs of specific infection, loss of sphincter control, diminished patellar reflexes, marked inco-ordinations and Romberg swaying, tremors, and bronchopneumonia. Speech thick and indistinct; pupils normal, sample of writing not obtained. He failed rapidly and during the last few days had some diarrhea, and the commitment papers speak of diarrhea for a month before admission.

Clinical diagnosis: Alcoholic delirium.

On *anatomical* examination of the brain there was found: *a slight and scattered lymphoid exudate in the meninges*, more marked in the gyrus rectus region; the large vessels were essentially normal, the intima being little changed, but a few cells were found in the adventitia. One optic nerve was atrophied, the other slightly affected. *Central neuritis* was also found in this case. The meningeal exudate, the optic atrophy, and the clinical evidences of syphilis, were considered sufficiently convincing, and a diagnosis of cerebral syphilis was made.

The following four abstracts I have included in this group as clinically syphilitic psychoses. One has been discharged, two are still inmates, and in the other an autopsy was refused.

CASE XIII. F. C. Admitted October 26, 1905; still an inmate; single, aged 28, always healthy, active, and a steady worker. Moderate habits. Contracted syphilis at the age of 25 for which he took treatment. The first mental symptoms were noted three months before admission. He gradually lost interest in his work, and as time passed became more and more forgetful. Many foolish tricks were noted. He emptied a bowl containing sugar upon his head, continued to scratch a match after it had been lighted, placed lighted cigarettes in his pocket, etc. About a month before admission he thought he was paralyzed, a natural result of defective gait and loss of

sphincter control which occurred at this time. On admission he was quiet, appreciative, and reacted well to his surroundings. He was apathetic, and a certain simple-mindedness was evidenced when he was spoken to; said he worried a little over his disease and sometimes had a fear of the police, for which he could give no reason. No particular delusional trend was elicited. He denied imaginations. Orientation good. Fair memory for both recent and remote events, with no inconsistencies or discrepancies in statements. Throughout his stay here of over five years there has been a very slow mental deterioration, shown now in apathy, a boyish manner, and neglect of dress. He continues to have a perfect grasp on his surroundings, and at times is interested somewhat in games and the daily news. Memory apparently good. The initial physical examination showed a fairly well developed man, giving evidence of a specific infection and a history of the disease contracted three years before admission. There was weakness of the internal rectus, the right pupil reacted slightly to light, the left sluggishly; both reacted normally to accommodation; exaggerated deep reflexes, weak sphincters and slight thickness in speech. In his writing he transposed and omitted some words. Recent examination shows normal pupils, controlled sphincters, dulling of general pain sense, rarely epileptiform seizures, normal writing, slight slurring in speech. About two years ago patient developed a gradual paresis of the left leg. Later he had a specific ulcer on the tonsil and soft palate. Both conditions cleared up quickly under antisyphilitic treatment. This case was put on antisyphilitic treatment immediately after he contracted the disease, and since admission he has been under treatment at different times without producing any change in his mental state. A recent puncture showed over 100 lymphocytes per field. Noguchi positive.

CASE XIV. R. S. A single man of 24, was admitted November 12, 1907, and died one year later. He began drinking, carousing and leading a sporty life in 1903, four years before admission. He became intoxicated frequently, and as a result of fast company contracted syphilis. In 1906 he had a "stroke of paralysis," later a convulsion. His mental faculties failed and he was at times dazed, restless, and subject to occasional episodes of violence during which he attempted assaults. During his short stay here he was fairly quiet and willing to remain. Emotionally he was somewhat depressed, easily upset, angered if crossed, and inclined to be fault finding. His coherent talk was centered about himself. Memory, orientation and calculation tests satisfactory. Delusions and hallucinations were absent.

Summary of physical examination, made at time of admission: A young man of 24, light complexioned, giving a history and showing bodily marks of a syphilitic infection (roughened tibial crests, scars of a former eruption over back, enlarged lymph glands, scanty growth of hair, scar of initial lesion), pupils unequal with slow and limited reaction to light, marked limitation of vision (fundus examination

showed left optic atrophy) and he presented a left homonymous hemianopsia, normal cutaneous sensibility, except over lower left extremity where there was a slight difficulty in accurate localization of touch areas, slight Romberg swaying, residuals of paralysis of left lower extremity and twitchings of muscles of anterior part of left thigh, increased tendon and absent planter reflexes, tremors of hands and tongue, albuminuria with casts, normal speech, vision too poor to write. During the last few weeks there was marked ptosis of the right eyelid and epileptiform convulsions. The case was placed upon mercury and ascending doses of saturated potassium iodide solution until constitutional symptoms appeared (140 gts. t. i. d.). No improvement was noticed. Autopsy refused.

CASE XV. I. T. Admitted July 30, 1904. Discharged after eleven months as improved. A paternal uncle was insane with melancholia. Patient was 54 years of age, born in this country, always healthy, industrious, and fairly intelligent. Common school education, temperate, machinist. Syphilitic infection at the age of 28, after which he was somewhat depressed but not insane. In August, 1903, patient was mixed up in a love affair, and after his young lady left for the West he became gloomy and threatened to commit suicide. He was unwilling at times to converse and to take nourishment. He spoke of visions and of talks with God. Declared that God had told him he should be at Sand Lake and that he should make every effort to get there. Here he was apathetic and slow in his movements. He thought there was nothing the matter with him and occasionally smiled in a superficial way. Often moaned, dropped his head, and sighed deeply, but refused to explain. Owing to his mutism, reticence, or evasive replies, the examination was unsatisfactory, but a good orientation was finally established, aside from the fact that he did not understand the nature of the place. Fair memory and school knowledge. Refused calculation tests. He admitted some apprehension. He talked and muttered to himself and had hallucinations of hearing, was occasionally restless and emotional. In December, 1904, there was noticed some improvement after treatment and he gradually became more sociable and interested in his surroundings until the time of his discharge. Physically the case presented headaches, a diminution of the general pain sense, normal gait and station, no inco-ordination, brisk patellar reflexes, tremors of tongue and facial muscles, arteriosclerosis, normal pupils, writing and speech. Three lumbar punctures showed eight, six and five lymphocytes.

The patient worked steadily at his trade for more than four years. He then became depressed and was readmitted October 16, 1909. Discharged after three months, as much improved. For several weeks before his return he had severe headaches and gradually became discouraged and melancholy. Two weeks before admission he called on a young lady whom he expected to marry in a few weeks. Upon his return home he was very depressed and staid outside the

door all night. Refused food and would have nothing to do with the members of his family. He was restless, resistive, and spoke of his brain being cloudy. On admission he was uneasy and discontented. He spoke of seeing faces and sometimes hearing voices. During the examination he turned his head to one side and said, "I'd do too much harm to Catholics. Ike, is that you? Yes, right here." (Hallucinatory reaction.) He also spoke of seeing strange things. At first he was completely disoriented; called this place a Methodist Church, located in Troy; gave the date as December 13 (October 18), and could not recall the day of the week. Memory poor for both recent and remote events. Calculation tests unsatisfactory, due to lack of co-operation. Physically, on readmission, there were severe headaches; increased knee-jerks with dilated pupils which reacted promptly; tremors of tongue and fingers. Lumbar puncture showed 13-20 lymphocytes per field. After a time he became somewhat brighter and said, "I didn't realize when I came here. I noticed when I came to my senses that I was on the ward." He spoke more freely about hallucinations and thought it seemed reasonable that he could hear his people talking in Troy. He even saw them sometimes and had concluded that God had given him some special power to perform these miracles. He improved under antisypilitic treatment. In January, 1910, he was bright, sociable, and free from delusions and hallucinations.

CASE XVI. E. G. Admitted March 25, 1905; still an inmate; father immoral and insane. The patient, aged 41, was intemperate. He is separated from his wife. He contracted syphilis two years before admission. Shortly before commitment he had an apoplectic attack, after which he was dazed, restless, and showed an irritable disposition. He developed hallucinations and was impulsive and violent. On admission he was very suspicious, resistive, apathetic. He had inability to write, read and understand spoken language, and spoke with paraphasia. Later he appeared more comfortable and was able to speak short sentences correctly, but he often put in incoherent words or pronounced imperfectly. The physical examination revealed signs of a syphilitic infection. The left pupil was irregular, eyes otherwise negative, gait unsteady with a tendency to favor the left leg, tendon reflexes increased, coarse tremors of tongue, arterial thickening, varicocele. He soon began to deteriorate; has been confined to his bed for more than three years with spastic paraplegia. During this time he has appeared rather stupid, but he probably knows and understands more than he is given credit for. He greets the physicians with a nod of his head, and makes his wants known by means of gestures. Physically he shows at present unequal pupils, the right being the larger, but both react promptly to light and distance, spastic paraplegia, more marked on the left side, and a dulling of the general pain sense. Occasional loss of sphincter control. Lumbar puncture shows 100-200 lymphocytes per field. No results from antisypilitic treatment.

In considering the clinical features of these cases, it would seem advisable in order to keep on fairly safe grounds, to confine ourselves to those cases which have been microscopically diagnosed as syphilitic, or probably syphilitic. This will be strictly adhered to in all deductions unless otherwise stated. While I feel that the last four clinical cases are specific in nature with the possible exception of No. XV, of course there may be some difference of opinion. I have decided to exclude Case XI for the reason that the anatomical diagnosis was too questionable. This leaves eleven cases to be reviewed. In only three of these (Cases I, II, X) was there a history of infection, but the anamneses were not very complete in some of the cases. The age at onset was variable, ranging from 19 to 79 years. There was one case each in the second, seventh and eighth decades, and two each in the third, fourth, fifth and sixth. It has been stated that approximately one-half of the cases of cerebral lues occurs in the third decade of life, but I believe this will be found at variance with facts as more attention is given to the microscopical work, especially of the arterio-sclerotic group of those well advanced in years.

The method of onset is rather interesting. In practically all of the cases failing physical health was first noticed, ranging in duration before the beginning of the mental trouble from three months to nearly six years. Case II had severe frontal headaches and failing eyesight for three months. Case V "ill health" for nine months. Case VIII was delicate for two years with headaches, and pains in stomach and abdomen. Case IX was never well after an attack of "gastrohepatic trouble", nearly six years before and after each debauch suffered much from headache and poor eyesight. Case X had insomnia and headache for six months. In two cases the onset was sudden with an apoplectic attack. In only two cases (Nos. III and XII) did mental trouble appear first. In Case III it may be that the depression did not result from his infection as he improved and took up business again for two years. Then more definite disturbance was ushered in by an attack of apoplexy. Case XII began suddenly with an occupation

delirium, but here the syphilitic process was complicated with central neuritis. Convulsions appeared first in three cases. In Case IV they had been present for three years before admission, and for one and one-half years before signs of alienation were noticed. The onset of the mental symptoms was gradual in all cases where apoplexy and convulsions did not appear first and where the picture was not complicated with another process as central neuritis in Case XII.

Among the physical symptoms which might have some weight in differentiating cerebral lues from general paresis, the following might be considered: (1) Physical signs of failing health usually precede the mental outbreak (Case I, II, IV, V, VI, VII, VIII, IX, X). (2) Focal symptoms probably occur more frequently at the onset. Apoplexies occurred in two of these eleven cases (Nos. I and VI). (3) Speech disturbances are less common. It was normal in four cases (Nos. I, II, IX, XII); of a paretic type in one (Case VIII); somewhat of a pseudo-bulbar type in another (Case III); stammering in one (Case IV); stammering and paraphasic in one (Case VI); not definitely described in two (Cases V and X). (4) Pupillary anomalies are less constant. In five the reactions and outlines were normal (Cases IV, VI, VII, IX, XII); in three cases (Nos. I, II, III) there were inequality, irregularity, or some disturbances in the light reaction which later became normal. Case V showed inequality with a limited response to light in both pupils nine years after admission. The reaction to accommodation was not obtained owing to lack of co-operation. In Case VIII they were contracted and immobile to light and distance, later condition not recorded. In one (Case X) the reactions were not recorded. (5) Writing defects are probably less frequently met with. Unfortunately a sample of the writing could not be obtained in seven of the cases which came to autopsy, but in the remaining four it was normal. Among the cases which did not come to autopsy two samples were normal, one was not obtained, and in the other (Case XIII) there was occasionally a transposition and omission of some words, but the

defect disappeared after a time. (6) The rate of progression of the disease is less rapid, the average duration of nine cases was six and one-half years. The mental disturbances show that (7) delusions are less common than we see in cases of general paresis. In four of the subjects (Cases I, II, III, VII) they were absent, while in Cases VI, VIII, X they were of a persecutory or somatic character. In only two (Cases V and IX) was there any expansive trend and in the latter (Case IX) there were in addition some notions of persecution and bodily disease. (8) In those cases with clear grasp, or even with temporarily dazed states, the subjects during their more lucid intervals did not show such a general lack of adaptability to their surroundings as we frequently meet with in general paralytics (Cases I, II, III, XII). (9) Cerebral lues undoubtedly occurs more frequently in the late decade than has been generally supposed (Case I at 49, Case IV at 61, Case VI at 79, Case VIII at 57, Case IX at 59).

The differentiation between luetic insanity and disturbances resulting from general arteriosclerosis may not be so difficult where we have a direct history of syphilitic infection, and the subsequent onset of alienation, or where we are dealing with the gummatous type of the disease, but in those cases where the syphilitic virus attacks mainly the vascular system, and especially where the mentality remains intact until the period of senescence, the question of diagnoses will have to be settled largely by the Wassermann test and lumbar puncture. I feel that the value of lumbar puncture is still unsettled, inasmuch as we have had at this hospital a case of arteriosclerosis with focal softening, giving a positive puncture and which failed upon microscopical examination to show any signs of a syphilitic process.

What relation has the development of luetic insanity to the thoroughness of the antisymphilitic treatment previously instituted for the infection, and what effect upon the mental symptoms can be expected by instituting treatment after the development of the psychosis? Dana says, "It has seemed to several students of the question that very vigorous and

prolonged and careful treatment of syphilis does not have any effect of warding off the degenerative, or even exudative process in the nervous centres. This was the conclusion of Collins and myself, and it has been reached by others. However, I believe that with the modern and more thorough and prolonged treatment, there is some prophylactic result." Of the seven subjects with a syphilitic history, including the four clinical cases, four are known to have received antisyphilitic treatment at the time of infection. In one instance (Case I) it was continued for several years. Six of these cases (Nos. I, II, XIII, XIV, XVI) received antisyphilitic treatment at the hospital, but in only one instance (Case XV) was there an immediate response to the therapeutic measures. Even in this case the diagnosis may be questionable. It would seem reasonable to expect beneficial results from treatment when instituted in the gummatus types, but in insane hospitals this form is rare as compared with the vascular type.

In conclusion I wish to call attention to Case XIII for the purpose of bringing into discussion the question of tertiary lesions in cases of general paresis. Dana says that we can have cerebral exudative syphilis with cranial nerve palsies and gummata accompanying the development of paresis. I have not observed tertiary lesions accompanying paresis unless Case XIII is one. I recall one parietic with large ulcers about the legs which were suspected of being syphilitic, but they did not respond to antisyphilitic treatment. Case XIII was diagnosed as general paresis on admission, but the onset three years after infection, the duration now of nearly six years, the normal pupils, the occasional appearance of tertiary lesions, the fair memory together with a fair adaptation to his environment, led me to include it in this group of cases.

A STUDY OF THE OUTCOME OF AGITATED DEPRESSIONS OF THE INVOLUTION PERIOD IN WOMEN.*

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There is no group of patients in our hospitals that is more distressing to observe on account of their acute mental suffering, or more difficult to care for than the agitated depressions. These patients impress themselves so forcibly on the attention and sympathies of those who have them in charge; and the course of their derangement is generally of such long duration that we are led to overestimate the relative number of cases belonging to this group.

It was a surprise to the writer to learn that during a period of fourteen years, in which there were 950 women admitted to the Rochester State Hospital, between the ages of 35 and 65 years, there were only 94 diagnosed as "melancholia agitata or involution melancholia," 10 per cent of the number admitted. It was also surprising that among 850 women now in the hospital there are only eleven cases of chronic melancholia.

This group of 94 cases, comprising 82 persons, has been studied specially in reference to the final outcome of the psychosis. Over nineteen years have elapsed since admission of the first case and five years since the admission of the last. Consequently the courses of these cases, with a few exceptions, have been followed to their termination.

The duration of the psychosis in eleven chronic cases now in the hospital ranges from six years to eighteen years. They present in their termination a varied picture. All are mildly depressed; several show atypical symptoms. None show a transition to the condition of senile dementia. In only two or three cases is there any marked deterioration. These eleven cases will be presented.

A review of the causes, onset and symptoms of these 94 cases confirms what is generally taught in regard to involution depressions. The exciting etiological factors were ill

*Paper read at the inter-hospital meeting, held at Rochester State Hospital, November 18, 1910.

health, including derangements incident to the climacteric, shock from death of near relatives—often augmented by strain of nursing during the fatal illness—business reverses, financial worries, difficulties connected with making a living, privation and overwork. Frequently two or more of these causes combine as upsetting factors. There was a history of heredity in 41 cases.

TABLE NO. 1. *Cases of involution melancholia, women, admitted to the Rochester State Hospital, from 1891-1905, a period covering fourteen years.*

Total number of cases admitted between ages of 35-65..... 951
 Number of cases of melancholia between ages of 35-65..... 94

Outcome	Number	Per cent
Recovered.....	49	52.1
Improved.....	13	13.9
Died.....	21	22.3
Remaining in hospital.....	11	11.7

Table No. 1 shows the number of recoveries, improvements and deaths as well as the number of those still in the hospital in the 94 cases under consideration. These 94 cases represented 82 persons.

TABLE NO. 2. *Number of persons studied 82.*

Outcome	Number	Per cent
Recovered.....	42	52.0
Improved.....	7	9.7
Died.....	20	25.0
Chronic.....	13	16.0

Table No. 2 shows the outcome of the psychosis in these 82 persons.

All of the number, without exception, were temperate, and with one or two exceptions were in fairly comfortable circumstances; all were hardworking women, burdened with responsibilities or harrassed with long continued worries; knowing little of the "joy of living;" of the over-conscientious, strenuous type.

The onset in most of the cases was gradual. In a few cases sudden. In these latter cases the precipitating cause was usually some moral shock such as death of parent, husband or child. In a great majority the psychosis was ushered in by sleeplessness, loss of appetite, brooding, pre-

occupation, neglect of work, depression, uneasiness and extreme restlessness.

Fifty-two per cent of the cases recovered. There were no symptoms noted in the cases that recovered that would in any way help in prognosis. In a large proportion of the cases the symptoms were very severe and continued for one or more years. Ten cases showed some symptoms of the manic-depressive syndrome and probably should have been grouped with the "mixed states" of manic-depressive insanity.

TABLE NO. 3. *Duration of psychosis.*

In patients recovered:	
Six months or under.....	16
Six months to one year.....	12
One to two years.....	10
Two to four years.....	8
Six years.....	1
Nine years.....	1
Twelve years and six months.....	1
	— 49
In patients improved:	
Under one year.....	4
Two to three years.....	4
Three to four years.....	2
Four to five years.....	2
Six years.....	1
	— 13
In patients who died:	
Under one year.....	9
One month.....	4
Two months.....	2
Four months.....	2
Ten months.....	1
One year.....	2
Two years.....	2
Two to three years.....	3
Three to four years.....	2
Five years.....	2
Seven years.....	1
	— 21
Remaining at hospital:	
Five years duration.....	1
Six years duration.....	2
Nine years duration.....	1
Ten years duration.....	1
Eleven years duration.....	2
Twelve years duration.....	1
Fourteen years duration.....	2
Eighteen years duration.....	1
	— 11

Table No. 3 shows the duration of the psychosis of those that recovered. The patient who recovered after twelve and one-half years has kindly consented to report at the hospital to-day and will be presented.

Of those discharged improved one case became chronic and was cared for at home. Two or more improved. Two committed suicide. Three have not been heard from. Death in ten cases was due to exhaustion; in six cases to enteritis; in three cases to acute infection. One patient died of cerebral hemorrhage and one of tuberculosis; the latter after seven years' residence in the hospital.

There was nothing in the cause, onset, or symptoms of those cases that went on to chronicity that distinguish them from cases that had a different termination. Three were rather mild cases; in the other eight cases the depression and agitation were pronounced; all of these latter in the acute stage had to be tube-fed and were suicidal. Without exception all presented delusions both auto- and allo-psychic of a very painful and frightful nature. Yet other patients with as extreme symptoms recovered after a year or two. Table No. 3 also shows the duration of the psychosis of these chronic cases. Eight of these patients have improved. Four are greatly improved; two to the extent of being able to live outside if a favorable environment could be provided; two others will probably ultimately recover.

As already stated these eleven chronic cases presented similar symptoms on admission; at present they show varied conditions. Two present an almost normal appearance; in three there is a diminution of the emotional depression, but there is apparently little intellectual enfeeblement; they are quiet, industrious and perfectly clear; two show marked irascibility, are solitary and suspicious; one shows a distinct paranoid trend; one catatonic symptoms; one a mixed manic-depressive syndrome; one has shown little change during fourteen years.

CASE I (1378.) Recovery after a hospital residence of twelve years and four months. Mrs. A. D. Age 55. Onset sudden at the age of 42 years; preceded by one year of bad health following pneumonia. Patient had been for years subjected to privation and worry. She

grieved over the death of her daughter which was evidently the cause of her derangement. Sleep was insufficient; she became reticent and sad; would hide about the house; said she could see the face of her dead daughter and begged her husband to kill her.

On admission she was worried and restless; seldom sat down; bit her finger nails until they bled; threatened suicide and to kill her children; was apprehensive; would cry, moan, walk the floor and wring her hands, constantly teasing to be allowed to go home. She gradually grew less sad but was surly, fault finding and resentful, rarely spoke, brooded, was easily irritated and would swear and use obscene language, but always in a low tone.

In 1905 it is noted "she is quiet and shows an unhappy, irritable and rebellious feeling. She is oriented; no memory defects; has a good grasp. Repeated efforts to influence her to engage in some work are unavailing. She shows resentment towards nurses and physicians."

During the next three years she improved gradually and, in 1909, it is noted "she is much improved physically, is industrious, careful about her dress, manner is pleasanter and she no longer teases to go home; is allowed parole of the grounds; facial expression is bright and movements are quick." Detailed examination showed that she was well oriented and that there was no memory defect; she had good insight. Soon after, she was allowed parole to go to the city. On returning to the hospital she appeared bright and cheerful and reported that she was making preparations to keep house for her children.

In May, 1910, she was discharged recovered. Since discharge she calls frequently at the hospital. She is capable and, aside from her housework, which she does well, she has taken up an agency and sells household supplies and has been fairly successful.

CASE II (1733). C. W. Age 57. Single. Farmer's daughter; affluent circumstances; strictly temperate; always been highly respected in community; father was insane.

Chronic case of eleven years' duration, greatly improved. She has parole and leaves the hospital for two or three weeks at a time. Two or three times a year there are slight remissions when she is depressed, irritable and mildly suspicious. These attacks of blues are generally coincident with some physical disturbance.

Patient was an industrious, capable woman. The first attack occurred when she was 41 years of age. The attack was evidently precipitated by exhaustion and worry, produced by nursing her mother through a long, severe and fatal illness. During this time she overworked and obtained insufficient sleep. Following this she was lonely and brooded over her mother's death, unjustly blaming herself because she had not given her mother more attention. She became depressed, uneasy and suicidal. At times her mood would change and she would sing. She became apprehensive, heard people defam-

ing her character, accusing her of immoral relations with negroes and of drinking to excess.

On admission the patient feared some one was going to kill her, she cried, moaned and wrung her hands, repeating the same words over and over. Said she had been dead and had "come to life again."—"All are dead and in another world."—"I died when I was home."—"I took some horse medicine." The world did not seem the same to her; her head was "mixed up." She slowly improved and was discharged recovered, after a hospital residence of one year and eight months. After returning home she cared for her home and her father, who was a very old man; was efficient.

After a residence at home of one year and eight months she was readmitted. Onset of second attack was sudden. Patient stated "I am so depressed that I can not think." "I feel as though I wanted to throw things at my father." "I feel as though I should harm my father and myself." "I saw the yard full of men." She threatened suicide if she was not sent back to the hospital.

On admission she looked haggard, was crying and was in great distress, said she felt impelled to kill her father; was sleepless, crying, moaning and at times screeching; apprehensive. She said that the nurses were going to murder her and she would save them the trouble by killing herself. She was persistently suicidal for some weeks; afraid that she was going to be transferred to some other hospital. She became assaultive and resistive; had hallucinations and delusions of fear. At the end of four months she began to improve. Her improvement was rapid and she enjoyed conversing and visiting with her friends but was very easily upset. For instance, when she received an invitation to visit her sister, she became very nervous and cried and said that she was afraid she was not well enough to go.

February 4th, four years after admission, the following is noted: "For the last three years has been greatly improved; at times seems quite recovered but at others is hypersensitive and easily upset, when she becomes depressed, has little courage and needs the supervision of the hospital. Miss W. visits her friends at a distance, coming and going alone; does her own shopping. She has made many new friends. She is industrious and fond of entertainment; there is no deterioration."

Since her home was broken up, there have been some financial and domestic complications which have been a source of worry and irritation. Patient has not the courage to take up new interests.

CASE III (2044). E. M. Age 53; widow; affluent circumstances. Two sisters insane; brother an albino.

Marked improvement, with probably ultimate recovery, in a case of depression after ten years residence in hospital.

Onset was gradual, at the age of 42 years. She complained for some time that she could "take no pleasure in anything." A few weeks before admission depression increased; she experienced a feel-

ing of weight in her chest, attempted suicide, said she wanted to put herself and her family "out of misery."

On admission she cried loudly, wrung her hands and repeated over and over, "Oh, my! My poor friends! Oh, dear! Oh, dear!" She evidently had a feeling of insufficiency, complained that she could not take the initiative, that she could not work; she also said she could not eat, could not let her bowels move or pass water, and that the only relief she could get from her bad feelings was by screaming. She rocked her body back and forth and moaned, pounded herself, walked rapidly up and down the hall wringing her hands; refused food; was resistive and apprehensive. She felt there was some harm coming to her child; also stated that she had a "machine" running in her head that made her do wicked things; that she was unworthy to live and some one must suffer for her misdeeds. She would sit with her back to others and with her face covered with her hands, refused to speak and attempted to get out of doors.

In 1904, three years after admission, the following entries were made: "Later she became quieter and industrious; yet still there would be times when she would worry and become uneasy. Her usual mood was one of irritability and when addressed she would refuse to answer or reply in a cross, surly manner. At times she would call loudly from the windows as if reacting to hallucinations of hearing. Her language at such times was obscene and profane and she showed feelings of anger."

She remained in much the same condition for eight years. During the last two years she has gradually improved.

At present she is allowed parole and enjoys visiting her friends in the city. She is ambitious and industrious and accomplishes considerable work; sews, washes, irons and cleans. She is clear and has no memory defect, except possibly for some of her experiences during her extreme depression. She has good insight, makes new friends and is much interested in the welfare of her daughter. At times shows a little emotionalism; says she is annoyed by music. But she appears contented and hopeful.

CASE IV (1798.) M. W. Age 57. Single. Domestic at home; affluence. Case of chronic melancholia of eleven years duration. Little deterioration, but is irritable and fault finding.

Onset of psychosis, at the age of 46 years, gradual. She cried, moaned and wrung her hands; at times screamed loudly and resisted every attention or clung to the nurses as though afraid. She complained that she had neglected her work and her church, that she had attempted her life and that there was no hope for her. She made repeated attempts at suicide and an attempt at homicide, giving as a reason "I will be hanged if I do it."

Suicidal and homicidal tendencies continued for about one year and during this time she was uneasy, walking, wringing her hands and moaning. After she was persuaded to sew, would walk up and down

with her work in her hands, sewing as she walked and reiterating, "I am wicked—I am the wickedest person in the world—I was always a mean old thing—I ought to be killed."

Four years after admission it is noted: "Neat in personal habits; is industrious, quiet, unsocial and speaks only in response to questions."

At present, eleven years after onset, she is quiet, her movements are slow; she is clear and oriented; her memory is good; retention good; she is unsociable and fault finding; rather inaccessible; quiet and shows little interest in the outside world, but her interest is confined to her immediate, monotonous environment. She is however systematically industrious.

CASE V (3690). H. S. Age 54. Divorced; comfortable circumstances. Etiological factors: worry and strain extending over a number of years.

Chronic state in which there is little affect, following a depression at the menopause; six years duration; condition much the same as on admission five years ago. No evidences of organic deterioration.

Onset sudden at the age of 48; occurring during menopause and following an acute illness. At first patient was sleepless, refused food, at times quiet; answered questions by "yes" and "no" or would say "I don't know, I can't think." At other times she would become uneasy or agitated, begging her friends to kill her, saying: "I am eternally damned.—I shall be eternally punished."

She has been mute since admission, except on a few occasions when she whispered so she could be heard a few feet distant. Her written answers to questions showed she was oriented. Her memory of school and general experiences was fair.

During the last four years she has not spoken, but replies to questions by writing.

At present she is apathetic but works daily in the sewing room and is neat and orderly in her habits. Recent tests show that there has been no deterioration since admission. There is no memory defect; she answers many questions by saying "I don't know," but when urged will answer them correctly.

Mrs. S. attributes her trouble to "the change of life;" she states that she does not care whether she lives or not; thinks she may be insane; knows that she is different from what she formerly was.

CASE VI (1517). Age 67. Farmer's wife; in affluent circumstances. Mother had apoplexy. Age at onset 55. Menopause occurred at the age of 51, accompanied by no abnormal symptoms. Onset about four months before admission. She began to worry over some financial trouble, became sleepless, restless and overworked; lost rapidly in weight.

Case of twelve years' duration. Still depressed and dejected. She is preoccupied and takes no interest in what is transpiring about her. Little change during the last seven years. No deterioration.

On admission she wrung her hands, cried, reiterated: "It is awful, it is awful;" walked the floor, moaned and said she was very wicked and was in the hospital for punishment; she was to be forsaken by her relatives and to become a pauper; said: "I saw Father L., the priest, and he made a motion for me to cut my throat;" or again: "Things do not sum up right." Four months after admission she had an acute enteritis continuing for several months.

The second year she was less restless and depressed, she had a feeling of fear, did some work, when not occupied sat in a dejected attitude. During the second year special efforts were made to overcome her depression. Physical improvement was marked but there was little change in her, mentally. She has been taken out on parole two or three times but did not do well at home.

At present she is orderly in her habits and does her work systematically and well. After completing her work she sits in one place in the ward; does not converse with other patients. She sits with her head bowed and hands lying in her lap; answers questions by nodding her head or in monosyllables. She is oriented for place and person and fairly for time; no memory defect; has a good grasp on her surroundings.

CASE VII (2030). M. W. Age 74. No previous attacks. Brother was insane.

The patient was 64 years of age on admission. She is a woman of good education and in affluent circumstances. She had been comparatively free from care until she met some financial reverses and complications, which seemed to be the upsetting factor; she began to worry about her clothing, said her sister was insane and that the house was falling to pieces; was afraid of fire, kept reiterating, "I haven't my clothes, I haven't my clothes."

Following admission she became more uneasy; moaned, cried and resisted attention; walked the floor and wrung her hands; was in fear of some calamity; thought her eyes were going to be burned out; that she was going to be cut to pieces. She looked haggard and distressed; was clear. Later she became more agitated, rubbed her head bald; had to be tube-fed. She felt as though she was "on a ship at sea." The second year she became quieter and assisted some with the work, but was still very dejected, restless and sad. The following year (1903) it is noted, "Physical condition improved; good grasp on environment; personal appearance neat; interested in what is transpiring about her; evidences a tendency to walk the floor and groan; apprehensive that she is to be sent away; occasionally she will smile."

Case entry, 1904: "Is neat in personal appearance; is industrious, assisting in dining room and sewing room. When unoccupied with work walks slowly back and forth, making a moaning sound; is in constant fear of being sent away." In 1905, "Facial expression happier; is less restless; manner more friendly."

At present there is apparently little deterioration. She shows a feeling of hostility at times; she is easily irritated and for this reason is somewhat inaccessible; will reply "I don't know" to many questions, when by subsequent remarks it will be shown that her statement, that she does not know, is untrue. She is clear, interested in news of her own town, but there is a slight memory defect. Patient is 74 years of age and possibly is becoming somewhat incapacitated by reason of age. She is industrious and systematic in her work, works daily in the sewing room; is self-centered, unsocial. She is irritable, feels unhappy, is cross in her manner and still fears that she is going to be sent away.

CASE VIII (1336). M. R. Age 70. Single; teacher; affluence; three near relatives suicided. Patient has been a cripple since birth—(talipes). She received a high school education and had many friends; has always been unhappy on account of her crippled condition. She had an attack of melancholia at the age of 29.

Case of melancholia of fourteen years residence in the hospital; greatly improved. Is not demented; is alert to what is transpiring about her but is unhappy, hypersensitive and irascible. Is feeble, physically.

The present attack began at the age of 57. Her agitated depression of severe form lasted for two years. She refused food—was afraid of poisoning, cried, moaned and wrung her hands; tossed about in bed, moaning "Oh, God! Oh, God! Oh, dear! Oh, dear! How can I get out of this? I will have to live through eternity in my miserable frame. I am going to be burned up." She was profane, obscene and often frenzied.

Miss R. gradually grew less agitated but was sullen, easily irritated and uniformly unhappy, resenting everything that was done for her comfort. She complained that something had been put in her eyes that affected her sight. Occasionally when friends called she would show some pleasure at seeing them.

At present on account of her feeble physical condition she remains in bed. There is little if any deterioration; she is alert to everything that is happening about her; is oriented; has no memory defect. She is unhappy and says in explanation: "I have been mad ever since I was young on account of my feet." She is pleased to hear from her friends; will smile occasionally and remark on the peculiarities of those about her, but is usually ill-tempered and uncommunicative.

CASE IX (501). E. L. Age 74; widow; mother died of apoplexy and paternal aunt was insane; previous attack of "nervous prostration" at the age of 31—immediately following death of husband.

Psychosis of eighteen years duration. Catatonic condition following agitated melancholia.

Precipitating cause of present attack was evidently the long sickness and death of her mother and worry over financial affairs. Patient walked about the house, wringing her hands and moaning;

manner dejected, continually lamenting, "My! My! Oh! Oh! I can't get out! Mamie! Beyond! Beyond! The doctors can't help me. I have committed the unpardonable sin." Her house was to be burned with all its contents; she could not get out.

Following admission she walked the floor constantly, wringing her hands and moaning; was mute. Agitated condition continued for three months, then there was some improvement, followed by a relapse into a state in which every attention was resisted. She would not eat; was very assaultive and homicidal, these reactions evidently being prompted by delusions of fear.

The following year Mrs. L. improved physically, was a little easier to care for, but still remained mute most of the time and was assaultive to the attendants. Occasionally she would say something that would show that she had some grasp on the surroundings; struck an attendant and later asked the latter's pardon.

Two years after admission it is noted that she ate greedily when no one was watching her; that she wet her clothing; tore off her clothing and stood nude; when an attempt was made to dress her she assumed a very vicious attitude—biting, scratching, etc. She remained in the hospital for eleven years; continued resistive about being dressed; would, however, go out on the lawn and to the dining room, moving slowly, when directed. She rarely spoke, occasionally would ask for something. At times she would suddenly make vicious assaults.

About 1903, she improved a little, dressed and undressed herself, took her bath willingly and was quiet, but she remained mute, would sit in a chair idle all day, with eyes closed. She was taken home on parole and remained home for two years.

On readmission she lay with knees drawn up, arms folded and held herself rigid; was mute; kept her eyes tightly closed; there was waxy resistancy and other catatonic symptoms; refused to walk; when not knowing she was watched she would make purposeful movements. She has remained in this catatonic condition for the last five years. At present there is a little improvement; will resist being taken down stairs but will walk back to the ward; will open her eyes and look about.

CASE X (1170). S. C. Age 74; single; occupation clerical; affluent circumstances. Father and brother were insane.

Agitated melancholia of fourteen years' duration, with extreme nihilistic ideas and ideas of immensity and culpability. Patient has grown feeble from age. There is little change after fourteen years. Still shows great uneasiness and resistiveness; reiterates that she "destroyed America," "the world," "the whole universe." She is "to blame for everything."

When about 40 years of age, she suffered from a series of depressing experiences; father's death was followed by financial reverses and illness of her mother to whom she was devoted and whom she nursed. Later suffered from a painful affection of the throat, and for a time lost her voice; ultimately she had to give up work and became dependant upon her friends.

Between the age of 40 and 50 she had five attacks of depression. Four of these depressions occurred rather suddenly, and lasting for a short time. She was blue, refused to see her friends and felt she had done wrong. The fifth attack was more severe, and was characterized by great uneasiness; she complained she had ruined everybody, that the end of the world was coming, that there was no food, that everything had gone to ruin. She was admitted to this hospital and after three months was discharged recovered. Fourteen years ago she was readmitted.

She walked about in a nervous manner wringing her hands, muttering in an undertone that she had been turned out of home, that everything had gone to destruction, that she was responsible for everything being destroyed, and that there was no use in eating, as it would do her no good.

Following admission she had to be tube fed and resisted every attention; would not remain in bed; would tear off clothing; would exclaim, "I have no stomach—this is the last government, the last world—everything is going to destruction."

In the years following there was much improvement; she would allow herself to be dressed and did fine sewing, but she continually gave expression to her nihilistic ideas.

In 1904, eight years after admission, it is noted: "patient stands by the window with hands over her face, body bent forward, rocking back and forth and exclaiming, "No, no, no, I am not going—I have ended all creation—there is nothing in the world—I have taken away the house and let the world go away—I have ended the world—I have ended the universe—I do not know what it is—I have destroyed everything." Will keep on in this way as long as she thinks anyone is listening. At times will stop long enough to converse with nurses about daily events; can be depended upon to describe accurately what has occurred in her presence on the ward, showing that she does appreciate occurrences, though, to all appearance, she manifests no interest in them. Upon first awakening in the morning can be heard to softly repeat, "I have ended the earth."

At present, fourteen years after admission, the patient is feeble physically; is inaccessible, refusing to reply to questions unless repeatedly urged. Still expresses the same nihilistic ideas—"all is gone, the whole universe is gone."

CASE XI (2922). S. P. Age 63; paternal grandfather, father and sister insane; the latter a patient in this hospital—(involution melancholia).

Case of involution melancholia; after six years and eight months showing little deterioration but a systematized paranoid trend.

Mrs. P. was a vigorous, masterful woman, but showed a tendency to look on the dark side of things (husband was insane and all responsibility fell upon patient). The onset of her psychosis was gradual at the age of 57. She was sleepless, restless and believed that some one was going to take advantage of her; feared arrest and

poverty; attempted suicide. She had some insight, said she was like her husband. "I fretted and fretted until I didn't know nothing—I couldn't make a pie." She harped continually on her "failings," depreciated what she had done well, accused herself of being a murderer. She worried constantly about financial matters for which there was no occasion to worry.

Three years after admission she had improved and was allowed to go home. There she threatened and attempted suicide. After her return to the hospital she said, when speaking of her visit home, "I did not enjoy myself, I worried all the time." On her return to the hospital she began to worry about financial matters, was apprehensive, believed that some harm was coming to her sons. She had a feeling of fear, was uneasy and could not apply herself to work.

She gradually grew more composed, became interested in her work of the hospital. She became suspicious of her friends and developed the delusion that she was being kept in the hospital and that others were getting the benefit of her property.

Mrs. P. is very helpful on the ward; certain patients who resist attention of the nurses will allow her to feed and attend to them. She takes an interest in the housekeeping and keeps herself neat and tidy. She sews and had earned money by sewing for others. She is, however, hypersensitive and when offended becomes depressed. The nurses have to exercise great discretion in managing so as not to offend her.

She has a good grasp on her environment and there is no memory defect. She has insight into her condition when admitted but no insight into her present condition. In response to the question, "Was your mind right when you were admitted?" she said, "No, I did not know what I was about."

She relates how she and her husband bought a farm valued at about \$5,000.00 and that they "paid all down" except a mortgage of \$1,200.00 and then they had good crops and it was easy for them to make their payments—"we had good luck." But for some reason she began to fret and worry and thought that they were going to "lose it all"—"I thought we were awful poor." She claims her niece took the mortgage, and after Mrs. P. came here one payment was not made and the niece foreclosed and she lost all her property (the latter statement untrue).

The business complications in connection with the settlement of her estate have evidently worried and puzzled her. She says that all her relatives except her son have been instrumental in ruining her and that therefore she does not care to see them—"I do not care the snap of my finger for them."

She believes that some arrangement has been made by which her board is paid to the hospital so it will appear on the books as though she were a reimbursing patient, and that in some way the money is paid back to her friends. When told that this could not be she said, "they fix it in some way."

CASE XII (3094). J. J. F. Age 57; farmer's wife; mother and brother were insane. First attack at the age of 32; second attack at the age of 47.

The onset of the second attack was rapid. Patient was sleepless, restless, nervous, and had tremor of the hands. At times she was terrorized with fearful delusions and on this account was resistive, thought she was going to be burned, had nothing to eat, that her family were starving. At times she was so agitated that she could not express herself clearly. She expressed somatic delusions; her flesh was putrefying and her body was shrinking. She lay for days in a pseudo-stupor. Gradually she improved but worried for some time about expense and financial conditions. Recovered. Duration of attack, four months.

Present attack has lasted six years and six months and it began four years after recovery from the second attack, at 51. On admission she had a feeling of unreality, said she did not look or act like others. "My feet do not look like other people's, do they?" Asks, "Is this the whole world?" She said she was shrinking; that the nurses and physicians were changed, "everything is so strange." At times she showed much agitation, refused food because she "had no mouth;" said she was the devil. At times would show great fear; was afraid the house was going down; would exclaim, "help! help!" Claimed that she had ruined the whole world; would run about the ward in a frightened manner; would beg to go home, saying she could not stand the electricity any longer; continued restless and uneasy.

Later she was less depressed and agitated; became irritable and sarcastic in her speech and seemed to take delight in tantalizing others.

During the last two or three years there have been some symptoms of the mixed type of manic depressive insanity. Her personal appearance is very untidy, hair dishevelled and clothing torn; she appears dejected. She is, however, sarcastic and unfriendly in her attitude; very alert to what is transpiring about her. She is perfectly lucid, has a good grasp on the situation and has no memory defect. At times her speech is free, showing a tendency to flight of ideas, and she will occasionally smile when she thinks she has made a clever speech. But she is hopeless of the future and has a feeling of ill-being.

The following extract from case record of October 24, 1910, demonstrates that there is no dementia but a chronic condition following an agitated depression, characterized by a feeling of ill-being, irritability and hopelessness, flight of ideas, tendency to word association together with some delusions of poverty.

October 24, 1910. Patient sat in a chair, clothing unfastened and chest exposed. Dress was ragged and unbuttoned. During the interview Mrs. F. did not get up from her chair, but she moved away from the writer.

She at first apparently was irritated by the attention shown her. Spontaneous speech was free. She showed some tendency to flight of

ideas and sound association; made very short and sarcastic remarks. The following is a stenographic report of her production:

When told the writer had come to see her, she exclaimed, "I have been interviewed to pieces. I had rather see the 'devil' come than you; Oh, dear! Oh, dear! I should think you would know we were sick and tired of seeing you. I wish I could get home; Oh! Oh! (agitatedly). 'See her arranging her toilet' (sarcastically referring to a nurse adjusting her cap). Did you hear of the death of one of our doctors (at her home), Dr. C., one of our Penfield doctors? He had been drinking heavily; he died sitting in his chair; no particular loss. He was instrumental in my being here, so I did not care much for him.' Then (suddenly changing the subject) exclaimed, 'There is not a ghost of a chance of my going home.'" The writer then said, interrupting her, "Yes, I think there is Mrs. F." "No, the day of miracles is past. I should not think you would pay any attention to an old case like mine; my case is chronic. Oh, dear! Oh, dear! they don't get any rest here."

How long have you been here? "Too long, I remember, but what is the use of going over that again. There are harrows outside to harrow up the ground; and think they have them inside to harrow up our feelings; I am so out of patience with myself. If I had known what I do now, I would have put an end to it (her life). Are you putting down what I say? I am talking at random (laughs)."

Do you keep watch of what is going on? "I don't keep watch of anything. Why did you come up here to tease me?"

Why do you go around with your dress undone? "You don't judge a man by the coat he wears."

Who is president of the United States? (Impatiently) "Oh my God! have you got a needle. Do you remember once of sticking a pin in me to see if I had sensation? You know they have agricultural experiment stations; this is a mental experimental station, isn't it?"

What day is it? "Monday" (correct).

What month? (Impatiently) "Oh! Wednesday, October."

What year? "One thousand nine hundred and ten."

Who is the president of the United States? "That is a chestnut."

Who is governor of New York State? "Hughes." Patient was told the circumstances of Mr. Hughes resigning and that the Lieutenant Governor, White, was acting-governor, Mrs. F. asked: "Does he take the governor's place the same as the vice-president takes the president's place? I don't care if he is black or green; it doesn't matter to me. Oh, dear! Oh, dear! (sighs). Do you realize how long I have been here? Not six years yet; I have been home since then."

Why did you come back? "They thought I did not have myself (referring to husband and daughter). I suppose there is no danger of my going home again." When told there was hope she exclaimed with considerable feeling: "God in heaven could not

straighten my case; things have got wrong, things have got crooked, I think I am very much demented."

When asked if there was something that in the beginning had especially worried her, she asked, "Do you think confession is good for the soul?" When told that the writer did, she asked if the latter was a Catholic; said she did not like the Catholics; thought it was silly to cross yourself. Said emphatically that she was not going to tell her affairs to every one. Refers to her brother who was insane as though she thought insanity was in her family, and thus less hope of her recovery. When an effort was made to encourage her she said: "If I am not a case of dementia, there never was one in this State hospital; State hell is nearer to it." When psychotherapy was referred to among the doctors as possibly a desirable remedy in her case she said: "Mrs. P. said you tried hydrotherapy on her, psychotherapy that is cyclonotherapy. It would take an earthquake to move me." During the close of the interview, patient referred to the fact that the apple crop had been poor this year, and that her husband and daughter had to work too hard and could not afford her clothes, etc. (Latter statement untrue.) Also, at times, her attitude was a little vindictive toward her daughter and husband; she said they found fault with her and criticized her.

CASE XIII (4848). R. M. H. Age 63. Patient was of a delicate constitution, socially inclined; was called nervous; worried over trivialities. She was married at the age of 20, had two children and several miscarriages. Duration of present attack, eight years.

Following husband's death, when patient was 40 years of age, she worried and brooded and was quite depressed. Following this was an interval of twelve years when she was quite herself.

At the age of 52 she again became nervous, depressed and hypochondriacal, could not apply herself to work, was afraid of some calamity. From the time she was 52 to her 59th year she had two or three attacks of mild depression and was cared for in a sanitarium.

In 1906, when 59, she became extremely nervous. She was restless, suicidal and apprehensive. She stated that she was suffering "eternal misery," complained a great deal of distress in the abdomen, continually harping on her physical condition. In 1906 she was admitted to Willard State Hospital and remained there for a short time. She was taken out by her friends before there had been very much improvement.

In 1909 she was admitted to this hospital. Since admission she has been extremely restless, most of the time walking the floor, frequently screaming at the top of her voice. She claims that all her abdominal organs are "atrophied and gangrenous." She will walk the floor wringing her hands reiterating, "I am dead, rotten, ruined. Why did I come here?" She is profane and obscene; at one time refused food and had to be tubed-fed. When her attention can be attracted she shows that there is little intellectual enfeeblement. She reads the papers and converses in an intelligent manner on current events.

A DISCUSSION OF PARANOIC CONDITIONS, WITH SPECIAL REFERENCE TO MENTAL DETERIORATION.*

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AND

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As is well known, in order for a case to be diagnosed as paranoia in accordance with Kræpelin's definition, it must present the following characteristics: The onset must be gradual, the first manifestations appearing rather early in life; the persecutory ideas must be fixed and systematized; hallucinations, if present at all, should play but an insignificant part in the mental picture; clearness of consciousness and the order of thought process must be retained, and with the progress of the disease it is essential that mental deterioration should not occur to any great extent. Cases, in which the development is rapid, in which the delusions show poor system or lack of system entirely, in which they change frequently, often becoming of an absurd, fantastic nature, numerous hallucinations, periods of confusion and incoherence in thought and in expression, with progressive mental deterioration would place the cases in the group of paranoid dementia præcox.

In a study of 882 cases admitted to this hospital from October 1, 1908, to September 1, 1911, we find that 43 were classified as paranoic conditions. A more careful examination of this material showed that 15 occurred on a basis of constitutional inferiority, and inasmuch as we think that these cases should be dealt with separately, they were not considered in this study. In others there appeared sufficient evidence of previous alcoholic over-indulgence to account for a paranoid trend. Several, in our judgment, did not show a sufficient delusional trend to be included in this group, and were, for that reason, eliminated from our con-

*Paper read at inter-hospital meeting, held at St. Lawrence State Hospital, October 25 and 26, 1911.

sideration. Subsequent to presentation of some of the cases at staff meeting, the further development of the psychosis was such as to definitely indicate that the earlier diagnosis had been an erroneous one, and that they could properly be placed in the dementia præcox group. There remained thirteen cases for our study. From this number we have selected four cases for presentation to-day, in three of which the psychosis was gradual in its onset, the duration at least several years, and in which mental deterioration, in our judgment, has not been demonstrated.

In the chronic organic reactions, such as paresis, senile dementia, etc., we, as a rule, do not have much difficulty in showing even in the early stage of the disease that there are glaring defects in judgment and reasoning ability, conduct and emotional reactions, and impairment of memory or retentive faculty; orientation becoming disturbed as the disease progresses, difficulty in elaboration showing itself, all of which demonstrates that deterioration is present.

Dementia præcox, in its later stage, also presents a typical deterioration picture that is hard to mistake. In the earlier stage of the disease, however, we often encounter difficulties, which call for finer points of discrimination. If, however, we are guided by Dr. Hoch's suggestions and study the reaction as a whole, we shall find that these cases show a "lack of cohesion of conscious personality." There are delusions, odd acts, hallucinations, etc., but all these manifestations exist more like foreign bodies, there being no tendency to elaborate or correlate them. There is no rationalization, and the affective reactions, which exist, are out of harmony. There is, therefore, no unity in reaction. When this lack of cohesion exists, deterioration is apt to occur. In addition to this, the interest of the individuals in the environment is interfered with; they live in a world of their own.

But what standard shall we adopt to determine the presence or absence of deterioration in the cases we have under discussion? Is the fact that these patients misinterpret, exaggerate and distort a good many of the occurrences about them, day by day, that they form im-

proper judgments and adhere to them in direct opposition to all experience, and notwithstanding all argument to the contrary, of itself show mental deterioration? Or if the patients present such misinterpretations, etc., and at the same time good memory, orientation and well preserved personality, can we consistently consider that they are not deteriorated? In other words, are we justified in assuming that, inasmuch as these interpretations are dependent fundamentally upon the delusional concepts of the patients and that judging from their standpoint they are acting in entire harmony with their environment, that this of itself is sufficient to indicate mental deterioration, when in addition the cohesion of conscious personality and the interest are well retained, and the patients are able to form good judgment on matters independent of the delusional trend. Does the lack of system alone indicate that deterioration will occur? Is the presence of hallucinations in greater or lesser degree indicative of unfavorable prognosis, or is it essential to take the mental picture as a whole in order to arrive at a conclusion? In this respect the same which has been said in regard to the early cases of dementia præcox may here be repeated, namely, that the only thing we have to guide us or to gauge deterioration or absence of deterioration, when the question of deterioration occurs in these cases, is not, as in the organic reactions, a memory or apprehension defect, but the presence or the absence of the cohesion of conscious personality, meaning thereby whether there is an attempt at hitching up the abnormal experiences with life about and with normal experiences; or conversely, whether these ideas stand there as foreign bodies, which the patient no longer tries to harmonize, etc., and whether in general the patient no longer is in contact with the environment.

What cases shall we include in this sub-division of the paranoia classification? From our study the group, as a whole, is quite small, less than 5 per cent of the admissions in three years. To limit it to the Kræpelin paranoia alone would practically admit of no cases being so classified—only one possible case out of 882 admissions here; and yet,

if we adhere to Kræpelin's description of cases that should be classed as paranoid dementia præcox, practically nothing remains. It seems to us that the statement of White and others that there are transitional forms between the true Kræpelin paranoia and well marked paranoid dementia præcox has a good foundation.

It would, indeed, be rather odd if in this special form of mental trouble under consideration, all cases should be sharply outlined into those with marked intellectual impairment and those with none, leaving no cases in the intermediary stage. We believe that our cases show that the symptom picture need not necessarily be in entire accord with Kræpelin's definition; that there may be lack of system, numerous hallucinations, etc., symptoms which, he says, indicate dementia præcox, and yet deterioration can not be demonstrated, and this after the psychosis has lasted for years. Of course, it may be stated that sufficient time in these cases has not elapsed to allow deterioration to occur. This may be, but even if years hence evidence of deterioration should occur, what are we going to do with these cases in the meantime?

The group of paranoic conditions, therefore, we believe should include cases of Kræpelin's paranoia and certain transitional cases, these cases showing as a more prominent manifestation of the disease a delusional trend, and which, at the same time, do not present any special affect, as in manic-depressive insanity, or indications of deterioration as in dementia præcox of the nature indicated above, and which can not be accounted for by special etiology, such as alcohol, or by acute physical diseases.

This does not mean that always when we say that a case is a paranoic condition (on the ground that it shows at the time no evidence of deterioration or manic-depressive features, for example) it may not later take another turn, that is, become a more profound disorder. The only thing we can say concerning it is, that on the whole, the cases which show in the beginning the cohesion, etc., are not apt to deteriorate.

We realize that in this paper we have not brought out

any materially new facts, nor have we entered into any profound theoretical discussions. We appreciate also that it would have been of decided interest to be able to determine the makeup on which these psychoses developed, but this was impossible owing, largely, to the fact that the anamneses available in these cases were almost always such as were obtained by our nurses, and we have not had the opportunity to carefully examine into the early life of the individual so as to be able to form any definite conclusions along these lines. We also realize that it is of no particular benefit, nor does it make any material difference generally what diagnostic tag is attached to any case; but, inasmuch, as it is necessary for us, for statistical purposes, to endeavor, so far as possible, to label our cases, a discussion as to what should be included in this group seems to be of value. If we are able, as a result of this paper, to stimulate discussion so as to bring about a clearer understanding as to what is actually meant by deterioration, and also, what cases should be classified in this group of paranoic conditions, we believe our efforts will have been amply repaid.

CASE I. E. F. Admitted January 27, 1909.

Family history: Father insane, committed suicide.

Personal history: Age 61; Ireland; brought to United States at 6; illiterate; early life uneventful so far as we know; employed at housework until 15; then as shop girl until the time of her marriage to a janitor at 20. She is said to have always been strong physically and of good habits and a careful housekeeper. In disposition friendly, cheerful, and not suspicious. She was the mother of three children, two of whom died in infancy, one is living at the present time.

The place of her husband's employment was a large office building in Syracuse. She assisted him with the work, and after his death filled the position. For about three years prior to his death the manager of the Western Union Telegraph Company, whose office was in the building, made numerous advances to her, which, patient says, she always rejected and of which she did not tell her husband.

Onset of psychosis: At the time of her husband's death, twenty-two years ago, the priest asked the patient whether her fourteen year old daughter was a good girl, saying that he would now be her guardian, etc. From remarks made at this time patient inferred that her husband had known that the girl had been watched on the street. From that time on there began numerous annoyances of her daughter and herself. They began to be followed on the street, people looked

at her as if she was a bad character, detectives watched them; mysterious things occurred in the place where she was employed; men called at night and wanted to approach her daughter and herself; lights were put out in the hall.

The girl was followed and accosted by men on the street and the information was conveyed to her that numerous derogatory remarks concerning her daughter's conduct and character were made. This kept up until the girl was 17 years of age, when she went to college, then these annoyances stopped. However, about eighteen years ago, which was one year prior to the girl's leaving home, there appeared in the newspapers an article concerning St. Mary's Church, stating that they could not tear it down as it belonged to heirs. In conversing with a friend, patient was informed that a certain Father H. had, fifty years before, been the priest there, and, knowing that he was a relative of hers, she consulted Mr. G., his attorney. She claims she was then made acquainted with the fact that Father H. had died before signing his will, and that a year later his signature had been forged by Father G. at the instigation of Father O'H., the then parish priest. Had it been possible to have this will probated, Father G. would have inherited certain books from the library of the deceased priest, and Father O'H. would have obtained control of the estate, as the will directed that the property be left to the church in trust, to be used by them until such time as a new church structure was erected, the estate then reverting to Father H.'s sister and her heirs. The probate of the will, however, was successfully contested, and Miss H., as next of kin, inherited the estate. Eight years later, this lady died, and Father O'H. then stated that there were no living heirs and he claimed the property, sold part of it, retaining the proceeds, and at his death willed the entire property to his heirs. All of this information, patient says, she received from Attorney G., and inasmuch as she was a relative of Miss H., she believed she had an interest in the estate, which estate was valued at \$300,000. Thereupon, she immediately engaged Mr. G. to look after her alleged interest. Since that time she has engaged many lawyers to endeavor to regain her property, but in each and every case they discontinued the matter "owing to interference by the church people," who had "conspired to deprive her of her rights," and she was always prevented from bringing the case into court. The last attempt was made about eight years ago. During all this time patient was able to properly care for herself—there was no return of the sexual trend; but she began to understand that the earlier annoyances she and her daughter had been subjected to were part of the plot, the intention at that time being to blacken their characters so they would not be credited in court in the event of the case ever coming to trial, as she knew that a person of lewd character would not be believed. She considers her commitment here a part of the conspiracy as it prevented her from consulting with her attorneys.

During her stay at the hospital the Catholic employees have joined the plot against her and in various ways four attempts at poisoning have been made, her treatment by some has been unjustly harsh, and she has been subjected to many petty annoyances.

In addition to this systematized persecutory trend, and independent of it, there developed two additional lines of delusions, one a property suit against the city of Syracuse, and another which led to her commitment here concerning the immorality of her daughter's domestics. For some weeks before admission patient lived with her daughter, a physician's wife, in Syracuse. After a week or two she became suspicious of the servants. The chauffeur's wife informed her that her husband had said the girl had "bumped up" against him, and if he had been a bad man he would have taken advantage of her. Following this, she constantly watched the girl. It was observed whenever the chauffeur went to the cellar in the morning to fix the fire the girl would have some excuse to go to the cellar also; when he did not go she would ask why he did not. From these actions patient concluded that the girl was immoral, although she never saw anything to corroborate this. She took the girl to task and the girl resented it very much. She communicated the matter to patient's daughter with the result that there were several wordy conversations and quarrels. The patient retrospectively stated that she had worked hard to keep her child pure and did not want her to be surrounded by impure influences.

From the time of her admission to the present day the patient has not shown any abnormality of conduct; she is always interested in occurrences about her; her emotional reactions are quite in harmony with the ideas and in no way abnormal; she resents her confinement here, and demands her discharge. Her orientation and memory are unimpaired; her judgment seems uniformly good.

In this case the psychosis is of gradual onset, the duration over eighteen years, the ideas are fixed and systematized, hallucinations have not occurred and absolutely no evidence of mental deterioration is present. The case seems to properly belong to the paranoic condition group, and more nearly fits into the description of Kræpelin than any case admitted in the last three years.

It is interesting to note that at the beginning of the psychosis there was quite an active psycho-sexual trend; that with the development of the querulent phase, this after a year entirely disappeared; that just prior to commitment another sexual trend developed, which had no reference to the previous ideas of the patient.

CASE II. M. A. W. Admitted June 6, 1911.

Family history: Father developed epilepsy in adult life; became insane and died in an institution.

Personal history: Born in New York State; 47 years of age; had usual diseases of childhood; secured a common school education between years of 9 and 16; learned readily, but acquired a poor fund of knowledge because she was unable to attend regularly. Menses appeared at 15 years, without noticeable mental disturbance; she gives a history of pneumonia at 25; and at the age of 35 she underwent a laparotomy at Women's Hospital in New York, when both ovaries were removed and menopause induced. She worked at home until 18, when she went to New York to earn her own living. At 19, she received an offer of marriage. She rejected it and the next day she was sorry and, as she says, has been sorry ever since. She followed various vocations, viz.: clerk in book store, operative in underwear factory, floor walker, waitress, music teacher, manicuring, milliner, at one time furnished a home in New York and rented rooms; again kept house for her step brother; had a furnished house at Asbury Park for roomers. Between these various positions she canvassed for the Sunshine Society in New York; was never very successful; was never able to earn more than a plain living. Last October returned to her mother's home and has remained in this section up to the time of her admission here.

Onset of psychosis: Undoubtedly fifteen years ago, when, as she states, an attempt was made to ruin her. A friend, with whom she was rooming, and who was engaged in doing crayon portrait work, induced her to go to the home of a patron while this friend made some business arrangements. Shortly after entering the house a gentleman called and asked for the patient; she did not know the gentleman and, while being introduced, the police entered and raided the house and all were arrested. The man gave the detective a bill and he was allowed to go. She was taken to court and discharged. Soon after this she noticed that she was followed on the street and shadowed wherever she went. It seems it was a "protection" for her, but annoyed her. Patient states that she is distantly related to Mrs. R. F. Mrs. F.'s sister, at her death about twelve years ago, left an estate of fifteen million dollars and it was at this time the patient's persecution increased. She was, at this time, conducting a rooming house on Fourth street. She knows that the house was watched night and day, the neighbors also noticed it. She employed a girl who was found by one of the roomers on several occasions to have turned the lights out in the hall and was sneaking around in a suspicious manner. Several other questionable acts were noted and a detective called in to investigate, and the girl was dismissed. Among her roomers she had, from time to time, many suspicious characters. A gentleman and his wife secured rooms from her, and a few days later she rented a room adjoining theirs to another woman whose appearance she did

not like. However, she had no idea that they were acquainted or had designs on her, until one evening she overheard them quarreling. Her name was mentioned many times and she knew they meant her. The man was quite provoked at the woman and made the remark, "Damn you! why didn't you put it in her teapot?" Every morning as she left her home to go to her work she noticed a man standing on the corner, who would look at his watch and move away. When she arrived at the place where she was employed she would see another man repeat this act. These she knew to be detectives. While living at this house she received letters on several occasions directed with her name but not her address. These the postman assured her must be hers as no other by the same name could be found. The letters were about the care of several pieces of real estate. At the real estate office, upon whose letter head the letters were written, they were quite concerned to know who could have been using their stationery. When she entered the office she noticed a man with a beard, who, upon seeing her, jumped under a counter. The office was located next door to a firm by the name of P. & Co. The patient has relatives by the name of P.

Her brother was a lawyer and while she was keeping house for him he had a lawyer friend. She overheard numerous conversations on legal matters. One in particular was of great import to the patient. The friend said to the brother, "What did you do with the will?" The answer was: "It was burned up." Then the question: "What would you do if Mary finds out?" The answer: "We'll say it was insanity." On one occasion she heard the remark made to her brother by a tenant in the same house, "There's better than her in the asylum." Again her brother said: "Put a bug in her ear and make her crazy." Her name was not mentioned, but she knew that she was the one talked about. Her brother was overheard to tell his friend, "When I get that money I won't be able to spend the principal." Several attempts were made in restaurants to poison her; she could taste the poison and had to change her place of obtaining meals. In Child's restaurant she was made deathly sick by an oily substance placed in her coffee to poison her. In Asbury Park, where she had a rooming house one summer, she heard her name spoken many times, and the remark, "Put her in an asylum; that is the only way we can get her money." She has often heard her name on the street in New York, and the above remark, or something similar.

She now, in retrospect, tells of overhearing her mother say to another woman, "I love Mary as much as if she were my own child." She thinks that she may have been born of wealthy parents and that the fact is concealed from her; that there was a will in which she was to receive a large inheritance (she has heard about three million dollars); that efforts were made to blacken her reputation, then to destroy her and finally to have her declared insane.

In this case we have a psychosis of at least fifteen years duration in which the delusional trend developed immediately after sexual experiences had been elaborated upon. The ideas seem to be extremely well fixed and systematized. During the latter years hallucinations have developed and have played quite an important part in the mental picture. At no time has she shown any oddities in her conduct; her emotional reaction is entirely consistent with her false beliefs; interest in her environment is well preserved. She is very insistent upon her discharge from the hospital, as it must be evident that she is perfectly sane and that she is wasting much valuable time, as this is the most promising season of the year for her work of canvassing. However, she shows what is apparently a normal interest in her surroundings; her conversation along lines other than her delusional trend shows no apparent lack of judgment and reasoning. In all ways there seems to be a perfect preservation of personality, but on account of the prominence of the sense deceptions, it would assuredly be excluded from the true paranoia group. The absence of deterioration after fifteen years would also seem to exclude the case from dementia præcox.

CASE III. M. J. H. Admitted January 23, 1909.

Family history: Negative as far as ascertainable.

Personal history: Born in United States; 47; single; seamstress and teacher; Presbyterian; early life was uneventful; developed normally; at 20 a man asked her to become his mistress. She claims that she reacted properly to this and that it had no influence on her after-life. At 27 she was engaged to marry a man who married another. She claims not to have been particularly disappointed. In her work she was self-supporting since the age of 12, and was always efficient. Disposition was cheerful and friendly, and she states she was never of a suspicious temperament.

Onset of psychosis: Began gradually in the fall of 1901 without any reason that we know of. For many years she had been employed by a family with whom she was extremely friendly. While sewing for them at this time she began to notice that they would mislay things; things would be lost about the house and invariably they would speak concerning these matters in her presence, all of which caused her to feel under constant suspicion of little thefts. Although these things were principally noticed with the one family the same thing did occur wherever she was employed. Nine years ago, patient

states, she was purposely inoculated with typhoid fever. She is unable to state by whom or for what reason. It occurred at the above mentioned family's house. Then began many minor annoyances, which she calls tantalizing things and they continued until about four years ago, when, at the house of her best friend, this friend's husband began to annoy her in many ways. He said to his wife, for example: "Are you going to that meeting? I have to go to see what can be done about it." Patient believed this referred to her. He called people by telephone. She did not remember what he said, but it had something to do with her. He was constantly occupied with her whenever she went to the house. The wife did not take part, but seemed to be "between the two." Although he constantly seemed to want to annoy her he was as friendly as before. People then began to more particularly call her attention to various articles in the newspapers, which articles they would connect with things she had done or was doing and they would bring things about to fit into these articles. It appeared as if people were constantly "play acting," portraying characters of plays and books. Men (always men and not women, or at times women, when they accompanied men), began to look at her in the street cars and talk between themselves. These men, patient states, were always middle aged. The misplacing of things continued. At times, the people would look for articles she could see right in front of them. The insinuating talk became more frequent. She then noticed she was watched and followed by detectives. Marked money was given her to cause her to feel uncomfortable. Her family and friends seemed against her and they at last conspired to have her committed to this hospital on January 23, 1909.

While here she conducted herself well in every way; was quiet and agreeable; mingled freely with the better class of patients, but retained her ideas. However, she exercised self-control and kept them submerged. She was paroled on December 7, 1909, and immediately upon going to her home the same annoyances began, the tantalizing talk, the play acting, and annoyances on the street. In October, 1910, she rented a room and became friendly with two girls who lived in the house, and everything went well until February, 1911, when she woke up one night and heard the girls with two young men and their mother laughing in another room. At the same time, electricity was applied to her sexual organs. She felt so annoyed that she wanted to commit suicide. Later the electricity was applied to other parts of her body also, and caused her intense pain. Then an X-ray apparatus was thrown through the walls of her room so people could keep track of what she was doing. All of this necessitated her adopting some means of defense, which she did. She was *readmitted* here April 7, 1911. At the present time, in a retrospective way, she talks about her former persecutions, which she still firmly believes. There has also developed a persecutory trend directed against those in the institution. She sees, especially at night and always with her eyes

open, moving pictures, in which people, connected with the hospital, appear. At times, these pictures are of a disgusting sexual character, again they are pleasant; one evening a Dr. K. appeared, another evening a woman. She knows these people were not there. She feels electric shocks in various parts of her body, which cause her intense pains. She speaks of it as cruel treatment, but especially there is irritation of her sexual organs. By means of this electricity she believes she is at times caused to masturbate. The electric power, it seems to her, is operated by physicians experimenting to ascertain what can be done with electricity. It is conveyed by means of wireless. She is constantly afraid at night that someone will get into her room and injure her. "I am afraid to be banged up; or get a dose that gives me a headache." Nurses and patients are always endeavoring to make trouble for her, and everything that occurs about the place she attributes to play acting.

In addition to this, queer things are done, which she calls a "library party". She saw a physician, named Aaron. She thought of Aaron's rod and how it turned into a snake, and then into a rod again. Then thought she was going to be the scapegoat. She claims that many such things happened, but she does not remember them and does not further elaborate them into a comprehensive system; but interesting and throwing a light on the whole set of experiences, is her statement that if she left here and did not marry she would commit suicide.

In talking of her trouble, she, at times, cries; again shows considerable indignation at her treatment and demands that such disgusting things discontinue. She insists she is well mentally and demands her release. At no time has there been any clouding; she is well oriented; her memory in all respects is unimpaired; her personality is well preserved; she shows considerable interest in her surroundings; is an efficient dressmaker and exercises good judgment in her work. She is friendly and sociable with other patients and talks intelligently on all subjects aside from her delusions.

In this case, we have a psychosis beginning gradually ten years ago without any special cause. At first there were no hallucinations, but later numerous false sense perceptions of sight and sensation developed. The delusional trend is entirely without system. She is totally unable to give any reason why she should be annoyed and persecuted. In accordance with Kræpelin this case, because of lack of system and the presence of hallucinations, would be classed as paranoid dementia præcox. We believe, however, that the fact that deterioration has not occurred in all these years, is against this, and that the case belongs to the paranoic condition group.

CASE IV. E. W. Admitted October 5, 1909.

Family history: Negative.

Personal history: Age 36 years; native born; high school education; of good habits; naturally rather quiet and would not go about much; has never had any serious illness with exception of pneumonia at 26. History states that patient at one time loved, but suffered disappointment because of the man's marrying another. Since that time she has continually harbored the idea that this woman is in her way and feels she holds the place which rightfully should belong to patient. During the above mentioned illness of pneumonia, she was attended by her physician whom, she admits, she has always admired and she considers his treatment of her almost miraculous, somewhat in the nature of a mental cure, as he concentrated his mind on her and she upon him. In confirmation of this she states that she had an experience which seemed very strange, but at the same time speaks of it as an actual occurrence. She says that her physician, having just left her room, an old prophet suddenly appeared with his hands raised aloft in blessing; his appearance was as someone of another world. He conversed with her about the physician, saying that when Christ lived upon earth He had the power to heal the sick and that He had bestowed this power on worthy ones and her physician had received that power. In 1906, during her mother's illness, patient developed her ideas of persecution. She believed that a number of women, who are prominent in W. society, and among them the wife of above mentioned physician, were scheming to have her mother committed to this institution for no apparent reason but amusement for themselves and annoyance to her. In 1908 she became well aware that the same women were still plotting mischief against her, having caught them in several small schemes, one woman she mentions in particular as endeavoring to cast suspicion upon the patient and physician, insinuating that the relations between the two were not altogether proper. In May, 1909, more active persecutory measures were taken to annoy her; she felt at this time that electricity was being used upon her through various sources; that her house was charged with electricity and it was impossible to use the piano; she also refrained from preparing food on the stove as she believed that to be charged also; felt it was unsafe to retire at night so remained up and dressed in order that she might detect the source of this annoyance. It was at this time she commenced an active hallucinatory experience. She continually heard the voices of her persecutors in the different rooms of her house and outside her windows at night. The voices were those of the above mentioned women, her physician, and various others. Her explanation of this was that the telephone switchboard in the city was being changed to a new location, and through defect in current she was hearing conversations; later she discovered that this was not the real cause, but that her persecutors had attached an electric talking machine to her house to annoy her. She reacted to her hallucinations and brought herself

into a very excited state because of them. She states she answered the remarks and questions she heard directed to her by the voices and has screamed out of the window in the night to drive away those she heard talking outside. On the occasion of hearing the remark, "I am a cocaine fiend and I am coming upstairs to kill you," she became greatly disturbed and made an attempt at suicide by inhaling gas. Nurses were brought to her rooms to watch and care for her; she resented their presence there, and, finally, in desperation she was induced to go to the Sisters' Hospital with the hope that there she would be free from her annoyances. She was kept at the hospital for four weeks much against her will, for she soon discovered that the electrical apparatus and talking machine were now attached to the hospital. The references now were lewd. "They kept asking nasty questions relating to the body and I would answer them."—"They accused me of being deformed."—"They accused me of keeping a disorderly house and things like that."

She left the hospital about the middle of June and stayed with a friend in a neighboring town until the first of October. The voices followed her, but were now not so loud, but more like a whisper and did not annoy her so much. She, however, learned from the talking machine that while in the hospital the women, who were persecuting her, had taken a picture of her physician's wife in the nude and had placed a picture of the patient's face and head on the body. She was told that this picture appeared in the medical magazines, was exhibited at medical society meetings, and also shown at a prominent hotel from a stereopticon lantern. "They said, of course, that I must have been demented, temporarily at least, to have allowed such a photograph to be taken." She now understands that they were trying to get an opportunity to send her here. Upon her return to the city she found that they had established a talking machine near the house where she had secured apartments and it whispered of a hospital experiment at a Western university and that she was to be sent there. She was very busy settling her new rooms, but she felt that she could not stand this annoyance any longer, so she hurried out and consulted the chief of police. The next two nights she spent in the police station voluntarily, because she was afraid to remain in her rooms.

During her residence in this institution there has been no apparent change in her mental attitude. She looks upon her confinement here as an injustice done to a sane person, and those of her persecutors who were responsible for her being sent here, and the authorities who are unlawfully holding her here will be made to pay dearly before a court of justice. Her enemies from W. make nightly visits to this house of ill fame to annoy her; they hold carousals in the basement, where she hears them talking and laughing at her. They perform all kinds of indecent practices, which she is obliged to witness. She now states that there are other reasons why she is held here. Prominent among these is the idea that her body is particularly adapted for furnishing a membrane that has been destroyed in fallen women and

that she has been kidnaped here in order that a surgical operation may be performed upon her and a portion of her genital organs removed for this purpose.

In her conduct on the wards she shows in her reactions as a whole considerable disturbance of her personality. When relating about her delusions she laughs in a silly manner, her emotional reactions being out of harmony with her delusional trend; takes but little interest in her environment and exhibits various odd acts, such as striking herself repeatedly. Her judgment is markedly impaired; her reasoning shows defect; she considers this is not an institution for the insane; the patients were sent here by the same conspirators that sent her and are held here for immoral purposes; that the doctors simply masquerade here, that they are criminals in disguise.

In this case the psychosis is again of gradual onset; the duration is about five years with a forerunner ten years ago; the delusions are not systematized, numerous variations have occurred; hallucinations have been a marked feature and mental deterioration is evident and will undoubtedly progress.

We have presented four cases, each of which shows a somewhat different symptom complex, but in all persecutory ideas prevail as the predominant symptom. In the first the ideas are fixed and systematized and they are within a small circle. No hallucinations occurred. There is no evidence of deterioration and no reason to expect any. In the second the ideas are again fixed and systematized, and yet hallucinations were a prominent feature, but the woman is a less open personality; again no deterioration has occurred, and it is not likely to occur. In the third there was entire lack of system and hallucinations were again prominent, those of sight being quite marked, but in spite of these apparently ominous symptoms and in spite of the long duration there are no evidences of deterioration. It must be stated that the most ominous symptoms have occurred within the past year. In the fourth the ideas were very changeable. Hallucinations of all the senses were extremely marked, and, in addition, mental deterioration has occurred. The first three cases seemed clearly to belong to the group of of paranoid conditions. The last, we believe was properly classified on admission, but now should be placed in the paranoid dementia præcox group.

A CONSIDERATION OF PARANOID IDEAS IN MANIC-DEPRESSIVE PSYCHOSIS.*

BY DR. CHESTER WATERMAN,
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It is quite generally conceded that delusions of a persecutory nature are not foreign to manic-depressive insanity.

Kræpelin, in one of his lectures on this psychosis, says, "We are repeatedly met by delusions; usually ideas of sin and persecution, more rarely ideas of grandeur. These delusions do not necessarily belong to the indications of the disease. They can be entirely wanting but can also be so strongly developed that they give a deceptive character to the whole condition."

Diefendorf says "in stuporous states of depressive type a few present coherent delusions of persecution accompanied by many hallucinations with clear consciousness." Mendell recognizes a paranoid melancholia in which the patients describe and explain slights, reproaches threatening attitudes, as all out of proportion to the trivial faults which they have committed, and also makes mention of a "paranoia periodica."

Friedman has also described several cases showing a strong paranoid trend but with undoubtedly a manic background, and differentiates these recoverable paranoid states from the true paranoia of Kræpelin by the fact that the delusion formation lacks continuity with the trend of thought of the patient's normal personality. In other words, the false concepts were the result of emotional disturbances or, as he terms it, were exogenous, and the cases cited terminated in complete recovery, with no antipathy toward those accused during the mental aberration.

It is evident, therefore, that cases of manic-depressive insanity may exist in which the formal alteration—*i. e.*, the flight of ideas or the retardation of thought and the motor excitability or reduction, as well as the characteristic mood, changes of the disorder—are comparatively in the background while delusions are relatively prominent so as to

* Paper read at inter-hospital meeting, held at St. Lawrence State Hospital, October 25 and 26, 1911.

more or less dominate the clinical picture. On the other hand, it would evidently be unwise and would not be conducive to percision in clinical description if we regarded, as some would have us, all cases of recoverable or recurrent paranoic states as manic-depressive insanity.

Dr. Nickolaus Gierlich describes three cases of what he termed periodic paranoia in which, as he justly insists, there were no symptoms pointing to manic-depressive insanity but each case presented recurrent attacks with normal intervals between them.

Presupposing then, that such ideas do exist in this psychosis, I have endeavored to collect cases observed in this hospital which show such symptoms.

There are cases of manic-depressive insanity in which delusions of persecution, ideas of jealousy and infidelity, etc., occur, and in which there is a history of alcoholic excesses. In such instances it is not improbable that the paranoid features may be due to the alcoholic excesses, and I have, therefore, eliminated these cases.

I have also set aside cases of manic-depressive insanity complicated by other toxic agents such as morphine, where a definite fear reaction, with suspicions and ideas of reference have resulted.

Definite endogenous toxic conditions have likewise not been considered—such as those resulting from the exhaustion of childbirth, acute febrile states, etc.

In reviewing some 150 histories of cases diagnosed manic-depressive insanity, I found quite a number in which the clinical picture was colored by this admixture of traits evidently due to the toxic influence but in which, nevertheless, there were symptoms enough to point to manic-depressive insanity.

It might be interesting to cite one case that was observed through three attacks in this institution, as evidence of the influence exerted by these agents. Prior to the first he was markedly alcoholic—became depressed with ideas of jealousy, hopelessness, unworthiness and with retardation. He recovered completely after five months. Some seven years later he was readmitted again, with a history of alcoholic

excesses. This time he was manic—had the same prominent ideas of jealousy and reference. Recovered after six months.

He was again admitted in about two years—not having drunk anything in the meantime. He was depressed, slow, retarded, but had no ideas of jealousy and recovered in four months.

In the review, also numerous cases were found showing brief and transitory ideas of a persecutory nature, but without sufficient elaboration or duration to be seriously considered. These ideas usually occurred at the onset or were brief exaggerations of actual occurrences, such as “they put me in hot water” (referring to the continuous bath), or “they wish to kill me” (in reaction to some necessary treatment). One girl, a total abstainer, at the very onset of her trouble, claimed, in her maniacal ravings, that her school chums were jealous of her and wished to harm her because she had stood at the head of the class. Another woman, at the onset, too, yelled that her neighbors were trying to get her husband away from her, but very shortly ceased to refer to this and developed typical manic symptoms. Such brief and transitory references I found to be quite common, but they were too fleeting to be considered. It is important to insist however that such transient ideas occur, especially at the initiation of the process.

We find likewise often in the depressed phases a well formed paranoid trend as a reaction to the frequently present delusions of self-condemnation or unworthiness. The patient feels that he is a sinner, has committed crimes, and so should be punished. He eventually develops ideas of reference, a conviction that he is to be punished, that he is watched, followed by detectives, etc., because of his sins. One woman refused to eat because filth was put in her food to show that she was a low animal. This reaction we can clearly understand on the basis of the affect usually found in manic-depressive insanity and it appears to be further elaboration of depressive ideas. They seem to occur particularly at the involution period.

Another group of paranoid cases of manic-depressive insanity seems to develop on a different basis—namely, on an

actual experience which has an element that would tend to produce suspicion and worry, and which either colors the otherwise typical manic-depressive reaction with paranoid traits or gives rise to a paranoid onset.

This is shown in the following cases:

"A. S.", a man of 43, who had always been considered rather "simple," but was able to obtain a common school education—married and was industrious, hard working and absolutely temperate in habits. He was, however, of a nervous make-up and, as he said himself, was subject to periods of "shaking with mental excitement from some trivial cause." These periods would last but a few minutes. He was employed as a section hand on the Rutland Railroad. Cars had been broken into on the line and frequent thefts committed. The patient, in the performance of his duties one day, found a cold-chisel on the tracks. He immediately delivered it to the section boss. Eventually, some suspects, who had been arrested, were placed on trial and the patient was subpoenaed to appear as a witness, simply to give testimony to the effect that he had found the chisel. He sat up nights worrying and brooding and finally developed the idea that *he* was to be involved, took to heart the jokes of his friends and misinterpreted ordinary remarks as relating to him. He was admitted to this institution, sad, confused and retarded, both in thought and actions, and after three months recovered perfectly.

The make-up of this individual which tended to give rise to upsets, together with the peculiar experience, seems here to have initiated this kind of attack.

However, some years later a similar attack occurred but this time without a precipitating occurrence. In this second attack he claimed to have overworked, and feeling generally out of sorts, developed a fear of a return to his former state. He again worried and brooded and finally became convinced that he was to be locked up or hurt in some way. He became confused regarding his environment and imagined that men were in the room for the purpose of getting him and heard a voice which he recognized as the sheriff's. He was apprehensive but soon became retarded, both mentally and in movements, although he retained the fear of the sheriff. He gradually lost the confusion and retardation and in four months left the hospital, recovered.

It is possible that the experience of the former attack still had its influence in this one. There were no ideas of unworthiness and toxic influence can be excluded.

Another case, very similar, but in whom there was quite a definite paranoid reaction, is—

"J. D.", a man of 43, also temperate in habits. He had attended school only until the age of 10, had worked hard all his life as a farmer and, living in an isolated section of the country, his home conditions were crude and primitive. He had never been farther than thirty miles from home. Although always industrious, he was in debt. He brooded over this fact and his head was muddled and he could not work. He became nervous and depressed, felt that he never would get out of debt. Very shortly he developed the idea that his neighbors were imposing upon him, misinterpreted remarks, felt that everyone was "down on him", that he was to be sold out, was to be put out of the "grange". From this he imagined he was to be killed, thought the priest was going to shoot him, that some holes his neighbors were digging were meant for his burial. He was restless, believing finally that his neighbors were at the bottom of all his trouble, reiterating frequently the fact that he had enough to get on with, and that his neighbors were to blame for his being locked up. Later, he felt that his brothers would benefit financially by his being out of the way, though they had offered to come to his aid at the onset and he had refused because of suspicion. On admission here, although anxious, his movements were slow and mental retardation was also evident. While he retained ideas directed against his neighbors for some time, he gradually improved, and after ten months returned home. Several letters since have stated that he continues well and has shown no abnormal signs.

Here, again, we have a man who, while perhaps not notably inferior in make-up, is an individual whose environment and advantages have been such as to render improbable any great degree of mental development. With soil of this nature we might expect derangement under any great stress. His psychosis also apparently started from worry over an actual fact. He brooded over debt, became emotionally very depressed and muddled. Prominent paranoid ideas developed, clearly arising from the original source of worry. And the elaboration was not logical, but apparently depended upon the state of worry, depression and confusion. He had no ideas of self-condemnation. He was bitterly antagonistic to the persecutions, but though he appreciated his "muddled" state, believed in them.

What apparently was at first a fear, finally, through a chain of faulty reasoning, became an actual belief.

Another case observed through two attacks developed a persecutory trend dependent also upon actual occurrences and evidently likewise the result of emotional disturbances.

"M. D.", a woman first admitted to this institution at the age of 38. She had received a convent school education until the age of 16 years. She is said to have acquired knowledge easily and to have specialized in music and singing. Subsequently, she learned the millinery trade, which she followed for a time, and also sang in churches. At the age of 16 she is said to have suffered the first attack of mental trouble, at which time she was active, noisy, and evidently elated. There is little history regarding this attack, except that she recovered in a short time. She was married at the age of 22 and while on her wedding trip was seized with another attack. Again activity was noticeable, everything bothered her; she was noisy, and tried to climb the wall. She apparently remained well after this for about sixteen years, when she was first admitted to this institution. Again she was restless, noisy and showed distractibility and well marked flight of ideas, with prominent ideas of persecution directed against her husband. She swore, talked incessantly, called her husband vile names, attempted to assault him, and destroyed furniture, etc., in their home. She was actively antagonistic toward him claiming he abused her, went with other women, that they could not keep a servant in the house because of these traits; that he would go away on the pretense of business, but in reality to take other women to the theatre, whereas he never took her. She was correctly oriented, but did not appreciate that her mind was affected. She felt that it was all her husband's fault and that he, not she, was crazy and should be confined. After a residence here of nearly six months she was discharged recovered in the custody of her husband. She remained normal for five years, when she again became greatly excited and assaulting, again accused her husband of ill-treating her, attempted to put poison in the food of her family. Once more she claimed that her husband was unfaithful, went with other women, had no thought of her and neglected her in every way. On admission she was profane, obscene and vindictive toward him, saying that he had put her here to gain possession of her property and in order that he might have a good time, with her out of the way. Although distractible, flighty and over-active, she appreciated fully where she was and was clearly oriented as to time. She gradually improved and after a residence of eleven months returned home again in care of her husband, who had written numerous letters requesting her discharge.

I have subsequently learned that the husband of the patient was not all that he should have been and that she

undoubtedly had some basis for her accusations and ideas directed against him. Here then, too, we see an exaggeration, if not an actual distortion of facts, but this time in a manic state.

Even granting that her husband was immoral and unkind to her, he did not wish to have her confined in order to obtain possession of her property, as is evidenced by his frequent and earnest letters requesting discharge. She was not satisfied with her home surroundings and with the onset of excitement and lack of self-control these thoughts came to the surface and were elaborated.

Here, as in the previous cases, is a reversion to the same concepts shown in the former attack—a coming to the surface of an undercurrent, with distortion and exaggeration apparently directly dependent upon the emotional reaction. There was no confusion present; she was keenly alert. Like the other two cases, she had a definite source of worry, but unlike them, she did not become depressed, but irritable and talkative, and she exaggerated and made more prominent certain grievances.

The cases I have cited were selected from a review of 100 consecutive admissions definitely diagnosed at staff conference as manic-depressive insanity. These, to my mind, were the only ones of that number exhibiting paranoid symptoms of sufficient prominence to be taken into consideration, after eliminating those having a definite toxic (endogenous or exogenous) basis and also those about which there was a reasonable doubt of diagnosis.

It would seem from these that the presence of paranoid ideas usually depended upon, or were elaborations of, actual occurrences.

That similar ideas are found, however, without dependence upon actual experiences, is evidenced by the second attack in the case of "A. S.", and also from the following case, which because of recurrent episodes, ideas of inefficiency, at times depression and especially in one attack the emergence from a state of depression into one of elation and over-activity, would seem to warrant considering the reaction as of the manic-depressive type.

A man "A. W.", was admitted to this institution on July 31, 1911, as a voluntary case, and the anamnesis was obtained entirely from the patient. His father was insane and, as he described it, "a crank on religion;" his mother was said to have been "nervous." He was born December 7, 1872. Until ten years of age, he suffered from frequent headaches which were followed by epistaxis and vomiting and usually occurred when he was excited. He had received a common school education and at first he learned easily, but later had difficulty in arithmetic and his memory was poor. His home life was not happy and at thirteen he began to work at odd jobs, later being employed as a machinist. At this he continued steadily, except for intermissions because of poor health. At the age of 26 he had typhoid fever with a relapse, during which he was delirious. He drank some prior to 19 years, but since that time not to any extent. He had an attack of gonorrhea when between 17 and 18 years of age. He was married at 22, but no children resulted, nor has his wife had any miscarriages.

He suffered from his first attack of mental trouble in 1897. He had been "overworking" for about four months; was seized with an attack of "malaria;" bowels became constipated. He was downhearted, irritable and cranky; would misinterpret questions asked him; would snap people up and then five minutes later ask to be forgiven. He recovered after four months, became happy and a great joker and, as he expressed it, would sometimes get into trouble for irritating people with these jokes. Later in the same year he had another attack; again "overworked" and suffered from insomnia; constipation again present. He imagined people were talking about him and trying to do him harm. He thought the company he worked for was trying to get the best of him, was trying to find some excuse for getting rid of him. No hallucinations were present and in a few months he recovered with good insight. He remained well then until 1901, when he "overworked" as before, could not eat, was sleepless, constipated, irritable, but not particularly depressed. He went to the country and lived on a farm for three years and he claims that during the last two of the three he was in excellent health.

In the fall of 1904 he traded his farm for a cottage in the city of Holyoke and worked again in a factory for three years, apparently normal. But in the spring of 1907, he again became tired; felt that his old trouble might return, and took two weeks vacation and improved. In March, 1908, however, after working too hard, he suffered another well defined mental attack. His appetite became poor; sleep irregular and bowels constipated; he became sulky, imagined people were talking about him and trying to get his job; he was also irritable, complained of some itching trouble with his legs and had difficulty with his forearm, which resulted in his leaving his place of employment. Later he felt that he could not walk across the floor without dropping, was weak, felt as though he could not talk. He did not work for a year, when he again took up employment on a

farm, and for a year prior to admission here he says that he had good days and bad days. His appetite was poor and he would wonder how he would get things done, his feet felt like lead and it would take him a whole day to accomplish a half day's work. He complained of being forgetful; said: "I couldn't get the power to make myself go ahead." He was subject to tantrums when he was extremely irritable and could not control himself at times, would beat his cattle, and on one occasion bit his pet horse on the nose. He thought of suicide but never attempted it. Auditory or visual hallucinations were never present. He imagined people were trying to get the better of him in various business deals, that his neighbors were putting obstacles in his way in order to bring about his failure and thus enable them to buy him out cheap. He noticed change of facial expression of those about him and imagined it referred to him in some way. On admission here a physical examination showed him to be a well nourished and developed man, with numerous somatic complaints; occasional attacks of vertigo when he blew his nose; frequent headaches starting at the back of the neck and centering over the eyes, worse at the end of the week; head also felt sore, with pressure pains in the occipital region; pain and tenderness in various parts of the body; frequent itching over the calves of the legs; tactile and pain sense were found to be diminished over an area approximately covered by the socks (both legs, but more marked on the left). General feeling of fatigue. Sleep irregular; tongue coated; bowels constipated; general failure of sexual power and desire. Later complained of a feeling as of a band about his head.

Mentally, he was quiet and conducted himself in a calm, natural manner; gave the account of his trouble above recited. He was perfectly oriented, showed no glaring defects in memory. School knowledge seemed in accord with his education. Calculation showed some intrapsychic difficulty, which he claimed to have always experienced. Insight was excellent and all symptoms were given in retrospect and recounted as abnormal.

In this case there was no actual experience for elaboration, but, nevertheless, paranoid ideas did occur.

To summarize, then, we found that in these cases of manic-depressive insanity reviewed, the paranoid symptoms were usually associated with some toxic element; that paranoid concepts were frequently further elaborations of depressing ideas; that fleeting ideas of a paranoid nature were commonly found and especially at the initiation of the process; that in some cases the paranoid ideas could be directly traced to actual experiences and were apparently elaborations of these, but that on the other hand, such experiences were not absolutely necessary for their occurrence.

PARESIS AND SYPHILIS.*

BY DR. ROBERT KING,

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In August, 1909, spinal fluid, taken after death from a patient, who was thought to be a paretic, gave a negative globulin test; examination of brain sections showed that the case was not general paresis. In February, 1910, a female patient died, who had presented atypical symptoms, but in whose case a diagnosis of general paralysis was made on account of excess of cells in the spinal fluid; the autopsy showed an arterio-sclerotic condition of syphilitic origin with some chronic meningitis. In December, 1910, one case, and in January, 1911, two other cases with diagnosis of general paralysis came to autopsy and were found not to present the characteristic changes of that disease. In May, 1911, a case thought to be senile dementia was found to be general paresis.

In the two years, August, 1909 to July, 1911, fifty-eight cases, supposed to be general paresis, died in this hospital, and there were twenty autopsies. In five cases of the twenty examined postmortem, the diagnosis had to be changed. I do not infer that in 25 per cent of the cases the diagnosis of general paralysis is wrongly made; autopsies are more likely to be obtained in atypical cases; three of the five cases quoted occurred in one month. I think we must also admit that a wrong diagnosis may be rightly made. But the figures are striking, and emphasize "the necessity of making clean-cut differential diagnoses with regard to the symptom-complex of general paralysis." (Meyer.)

The difficulty in differentiating between cerebral syphilis and general paresis in certain cases has long been recognized. Hack Tuke, in 1892, gave the following points for diagnosis: In syphilis the onset is by somatic rather than psychic disorder, the course is more irregular, the duration

* Paper read at inter-hospital meeting, held at St. Lawrence State Hospital, October 25 and 26, 1911.

less well defined, the appearance often cachectic, the headache more severe, nocturnal and deeply seated, and increased by pressure or warmth; motor affections are of paralytic nature rather than a mingled weakness and ataxy; mentally there is dementia with depression and apprehension.

In March, 1908, Dr. Meyer reported at the Binghamton conference, a brain from a case of *tabes dorsalis*, in which the microscopical examination showed a process of diffuse cerebral meningo-encephalitis, especially in the basal region, but not the typical lesions of general paralysis in the cortex of the convexity; it suggested to him the possibility that actual syphilitic processes might simulate general paresis.

Oppenheim (1911) finds stupor characteristic of syphilis, dementia of paresis. He says that the dementia associated with syphilis is not progressive and is seldom developed to a high degree, so that the patient retains for a long time an insight into his condition. The long prodromal neurasthenic stage is absent in syphilis. Cases occur, nevertheless, in which the most experienced observer can not come to a definite decision. There is in particular a form of diffuse syphilitic meningo-encephalitis, which can not always be distinguished from paralytic dementia. Even pathologically it may be very difficult to differentiate between them. French authors speak of syphilitic pseudo-paralysis, and maintain the existence of numerous intermediary conditions between it and true paralysis. Alzheimer speaks of transition forms. Oppenheim thinks it possible that the paralysis may in many cases develop out of a true cerebral syphilis.

Sachs, in Osler's System, says that cerebral syphilis often gives rise to a combination of symptoms, which it is impossible to differentiate from dementia paralytica.

I assume that the members of this conference are familiar with Dr. Dunlap's paper on the Relationship between General Paralysis and Some Forms of Late Cerebral Syphilis. (Read April 4, 1911, at the New York Neurological Society). It is sufficient to state here that his views do not

conflict with those already quoted. He particularly emphasizes the frequency with which cases of a certain type of cerebral syphilis are classed as paresis. "Cases of general paralysis are almost always diagnosed as such, but a number of cases are put (on clinical grounds) into the group of general paralysis which do not belong there."

Dunlap further speaks of general paralysis as coming on in certain individuals after a variable number of years during which syphilitic symptoms have been absent. The striking features are a disintegration of the whole personality, a progressive mental and physical deterioration, in which we notice especially defects of memory, judgment and speech, and disorders of the pupillary and tendon reflexes. In syphilitic cases no clear clinical picture can be made. The diagnosis of the cases sent to the Institute included general paralysis, arteriosclerosis, epilepsy and brain tumor. Syphilis is not so clearly progressive as general paralysis, and deterioration is less profound and less general. There may be, as in general paresis, a long preceding interval of freedom from symptoms, but there is more likely to be an interrupted series or more or less transitory neurological incidents. The mental symptoms appear about a decade later than in general paresis and the duration is longer. The personality is relatively intact; speech defect of the general paralytic type is usually absent; memory defect and general reduction in efficiency are common to both. The outlook is better in syphilis, but of the value of treatment in this type we know almost nothing.

Hoch says that in brain syphilis the personality is much less disintegrated; one finds memory defect, confusion, delirium-like conditions, but through it all one can see a better personality than in general paresis. Memory defect for recent events may stand out strikingly, while the memory for old events may be less affected.

Henderson believes that Argyll-Robertson pupils are extremely rare in cerebral syphilis; Mott, that for all practical purposes they are only met in parasyphilis, but both apparently limit the term cerebral syphilis to the text book forms.

Pleocytosis and excess of globulin content are common to both affections and most marked in the more acute, that is, generally speaking, in syphilis. The Wassermann test may be of help. Karpas, like Plaut, finds that in cerebral syphilis the serum is usually positive and the cerebro-spinal fluid negative. A marked positive reaction of the fluid argues in behalf of general paralysis; a negative fluid reaction does not rule out general paralysis; a positive finding in the serum indicates syphilis, but not necessarily of the nervous system.

In attempting to orient ourselves in the pathology of these conditions it is only right to note that the cortical changes characteristic of general paresis are not absolutely specific to that disease; Mott has found exactly the same lesions of the nervous tissues in chronic trypanosome infections. Dunlap suggests the possibility that all these later manifestations of syphilis may be the end products of causes similar in kind, in syphilis acting largely on the meninges, brain stem and vessels, in paresis on these and on the cortex as well. In all organic cases, even in the comparatively simple phenomena of hemiplegia, hemianopsia, or aphasia, difficulties are met in establishing a relation between lesions and symptoms. Are we then justified in stating that a certain extent of lesion is necessary to a loss of personality, or that loss of personality indicates any definite form of destruction? The same question arises when we consider individual symptoms on which special stress has been laid, as the character of the speech, the pupillary reflexes or the spinal fluid. Moreover, the discrepancies between the degree of severity of symptoms and lesions, and especially the occurrence of remissions appear to indicate that the process is toxic, and the physical changes in common with the mental derangement effects rather than causes. "Mistakes in diagnosis often occur because undue importance is given to some symptom or physical sign which is present. . . . We all know how one's judgment is apt to become biased in favor of some particular theory or idea, and how under such circumstances, one sees everything in the light of that idea." (Byron Bramwell).

The first case in my series is that of S. T., No. 6696, admitted May 19, 1908; age 53; nurse girl before marriage; married thirty years; three children, all dead. Eighteen years before admission had a bad fall, lost the child she was carrying and was blind for two weeks; had been subject to dizzy spells, would fall in the street or in the house and lose her mind for a while, but would get all right in a day or so; never used liquor except in sickness.

On May 10, 1908, seemed well as usual; two days later was found wandering around the railway station; thought men were following her, imagined dreadful objects were after her; tried to jump out the window; removed her clothing and refused food; was incoherent and rambling in her talk, called everyone doctor; attempted assault. Her husband said that these spells had been coming on for three years, and were getting worse all the time.

On the way to the hospital, patient would call for whiskey, saying she had always had it; was restless, sliding off the seat on to the floor; had to be carried when changing cars.

On admission, she was well nourished, but feeble and unsteady on her feet; showed general tremor of the whole body, especially of the limbs and tongue. Speech was slurring and stuttering.

She was resistive and did not co-operate in her examination; said she felt "lovely," at the same time crying. Pupils sluggish to light, reflexes very active, had retention of urine; pulse of high tension; no sclerosis of radials mentioned.

Mentally, she was very restless and irritable; refused food; would not stay in bed nor keep herself covered; put her hair in her mouth and chewed it; frequently cried or laughed without apparent cause; appeared dreamy and disoriented; said her name was "Goke"; had auditory and visual hallucinations, and seemed apprehensive; talked of seeing dead babies in the ventilators and toads and hopping things. Her attention could be attracted and at first she would endeavor to give intelligent replies. The examiner in presenting the case at the staff conference said the woman was in a sub-delirious condition, and that the case seemed to be one of four things, an exhaustion psychosis, a pseudo-general paralysis, general paralysis, or delirium tremens. He favored the latter.

By June 2d, she had improved, but was still somewhat clouded; was oriented for place and had some insight; was childish in conversation and cried easily; was able to be up and dressed; was tidy and went to the table for her meals. At the staff conference, June 9th, she said she realized that something had come over her and spoke of it as a dream. A distinct period of amnesia was established. She said she was 32 and had been married twenty years; she stumbled over test words. Epilepsy was suggested as another possibility and discussion postponed to await further developments.

On August 17th, she seemed much better mentally, and had parole of the grounds; still said she was something over 30 years of age. On

October 8th, had a severe convulsion, followed later by five more, in all of which the left side seemed most affected. On October 12th, lumbar puncture showed 30 to 80 cells to the c. m. m. The diagnosis was changed to general paralysis. She continued to have occasional convulsions from time to time; was sometimes confused and had to be dressed and undressed; was easily annoyed and at such times used vile language, cried, scolded and was sarcastic about physicians and nurses; at other times was agreeable and intelligent in conversation. The general impression she gave was of epilepsy rather than paresis.

On January 4, 1910, she had 65 light convulsions and 29 on the following day. Two days later she was confused and excited, would not stay in bed, tore her bath robe and night gown in pieces. A week later she was dressed and appeared as well as usual, but rather feeble. On February 9th, at 1 P. M., when going to the bath room, she became paralyzed on the left side, and convulsive twitchings began again at 9 P. M., and continued till 1:35 P. M. February 10th, when she died. At autopsy the brain weighed 1 K, and showed considerable symmetrical frontal atrophy. The pia was rather thick, but transparent. The basal vessels were all greatly sclerosed. On section, a number of small degenerative lesions were found, particularly in the right lenticular nucleus and marrow, but some in the left lenticular nucleus as well. There was extensive degeneration of the right temporal tip. A recent blood clot was found in the anterior limb of the right internal capsule. Microscopically, the endarteritis was seen to be of syphilitic type; the pia showed moderate infiltration with lymphoid and plasma cells.

In the light of the autopsy it is possible to briefly sum up the case: persistent physical signs place it in the group of chronic organic conditions; differentiation among these must depend on the probability of a syphilitic infection, and on the mental symptoms. The preservation of personality, on which emphasis is laid by Hoch, is especially striking. After the delirium had passed, the patient settled down into a quiet, unprogressive, child-like dementia with insight and correct, if weakened, judgment. The pupils were sluggish, not fixed. Concerning the speech defect there is need of further definition. Oppenheim describes a paralytic speech, which he claims is peculiar to general paralysis, but one may suppose grades and transitions and it is the indefinite cases which cause difficulty. The significance of pleocytosis was not so well understood when the diagnosis was made as at present, and subsequently the case was not sufficiently studied.

The second case, A. H. W., No. 6533, was first admitted December 14, 1907; age 43; commercial traveler, married with four children living, one dead; heavy drinker; in 1905, two children had typhoid fever and his wife nervous prostration. In 1906, patient was twice operated on for rectal abscesses and fistula. During the summer of 1907, was more or less excitable and rather talkative, but after a time seemed to improve. In November he became irritable, excitable,

took dislikes to his friends, swore much, was rather careless, did not spend his money with good judgment. He continued to work until December 9th, when he became greatly excited and very violent; said he was the Almighty and was going to crucify the Jews; that he could raise people from the dead; that he had all of Rockefeller's money; threatened to shoot everybody; jumped through a window. On admission, he had active knee-jerks, but no defects in pupils, speech, handwriting, gait nor co-ordination. He was quiet and responsive; said that something had burst in his head; that he had been drinking three or four glasses of gin a day; was very hazy as to recent experiences; thought he must have had a stroke, or been sandbagged, or operated on, his head felt so queer. Said he had had difficulties with his business the past two years and had run in debt, but now felt fine and would treble his business next year; that he was the best experienced salesman on the road. He had no general memory defect. The case was provisionally diagnosticated acute alcoholic delirious state. Patient continued pleasant and agreeable, and corrected his delusions. He was paroled home February 12, 1908, and discharged recovered two months later.

After leaving the hospital he acted queerly; would apparently see objects in the air and reach for them; would not go into some parts of the house after dark; obtained a position as traveling salesman and would come home about once a month, at which times he was very irritable. Early in July, 1909, he wrote his wife that he was making barrels of money, and was going to take the family to New York. He returned home July 28th; would not recognize his wife and did not want to go to the house. Became very threatening and was readmitted here July 30th. His reflexes were increased, pupils sluggish, speech slurring, tongue tremulous. He was oriented for place, but noisy, boastful and very restless; said he was God; that he had a big deal on with the telephone company and that they were jealous on account of his business ability; talked of hearing girls singing and would look up at the ceiling and talk to imaginary people and make motions for them to come down; was extremely active; bruised his left hip; got infection of the joint and died August 9, 1909. The clinical diagnosis was general paralysis. Cerebro-spinal fluid taken postmortem showed no excess of globulin.

Dr. Dunlap's summary of the pathological findings contains much of interest and may profitably be given in full:

"In a brain, which showed little except moderate thickening and slight milkiess of the pia, the microscopic examination failed to show the characteristics of general paralysis, but it showed thickening and fibrous change in the medium sized and smaller blood vessels of the pia and cortex, and considerable pigment. It also showed numerous polynuclear leucocytes in many of the cortical blood vessels,

and among these leucocytes numerous cells with nuclei and protoplasm resembling those of plasma cells. A few cells of this type were found free, or at least were believed to be free, in the pia. The neuroglia showed considerable reaction in places, in the form of spider cells, and the cortex contained considerable pigment in the usual reservoirs. It would seem probable that the leucocytes and plasma-like cells were to be explained by the recent infection of the leg. The changes in the pia (thickening, fibrous tissue, etc.), were evidently old, and while they could be accounted for satisfactorily on a syphilitic basis, we have no other evidence for this basis, and a syphilitic etiology is probably unnecessary for their production. We have little knowledge as to the influence of alcohol in producing such changes. That which appears to be more acute in the case (polynuclear leucocytes, plasma-like cells, possibly satellites, etc.) would seem to belong to the leg infection, and we would be inclined to assume that without this infection only the more chronic changes (fibrosis, pigmentary changes, etc.) would have been present. Clinically, the case was defective, but it looked like general paralysis, and it was a surprise not to find the changes either of this process or of cerebral syphilis; but certainly, with our present standards, we can not make a diagnosis of either on the evidence at hand."

The case then must remain unsolved and unsatisfactory, but it is not on that account deficient in interest or stimulus. The underlying condition was chronic, extending over four or five years, and there were two delirious episodes, resulting each time in patient's commitment. After the first delirium had passed, the staff were able to agree on a diagnosis of alcoholism; during the second period of delirium the patient died of an intercurrent affection. In this connection a quotation from Mott (*Archives*, Vol. III, page 458) may be of interest: "In most cases of alcholic poisoning, in the early stage, the pupils may be sluggish to light, the facial expression altered, the tongue and lips tremulous, the speech often slurred and syllables may be left out, the handwriting tremulous; and not only may the spelling be incorrect and the words cut up into separate syllables and letters and syllables left out, but marked mental confusion may show itself in the matter expressed. The knee-jerks are altered, sometimes exaggerated, sometimes diminished or lost . . . most marked and perplexing are delusions of wealth." So we must leave the case, noting as influencing factors excessive alcoholism, illness of his children, his wife and himself, with consequent expense and debt, followed by

financial difficulties, due to the business depression of 1907, and some infection of the pelvis, causing abscess and rectal fistula in 1906, and possibly infected hip joint in 1909. If the mental symptoms in paresis are the effects of action of a toxin on the nerve cells one need not feel surprise that alcohol or chronic septic intoxication gives similiar symptoms, but rather that characteristic features are found as a rule to differentiate them. Some symptoms, notably delusions of infidelity in alcoholism, suggest a somatic and selective origin. Incidentally, since Freudian mechanisms are brought into play in toxic conditions, it seems possible that such mechanisms have always an organic basis, and that "psychogenetic" has much the same real meaning as "ideopathic."

The third case resembles the second in having a chronic source of intoxication as a possible causative factor. F. W. S., No. 7460, was admitted April 12, 1910; farmer; age 45; married with one living child, none dead; always healthy and industrious; had had middle ear disease for over a year. His psychosis began suddenly April 1, 1910. He became very active; was restless at night; talked almost constantly of money he was making; bought and sold things; was irritable and made threats when crossed; was boastful; said he owned the United States; was destructive, profane, and obscene; had hallucinations of hearing; resisted coming to the hospital. On admission, was in good physical health with slightly active reflexes; was restless and noisy. The stream of thought was rapid and flighty; he showed some distractibility. He was oriented, and his memory was good; was alert and had some insight. The diagnosis was manic type of manic-depressive insanity. Following admission, he was active, somewhat pugnacious, talked fast and continuously, lost insight, became untidy, developed hematoma auris; was very destructive to his clothing; would eat all manner of filth, and put papers and various articles into his nose and ear; would not talk. About December 3d, an abscess formed in the right temporal region and he died of septicæmia December 16th. At the time of his death he was believed to be a case of paresis.

At autopsy the calvarium was heavy and dense with little diploe; the pia showed marked cloudiness and there was some excess of cerebro-spinal fluid; the basal vessels were in good condition. The brain weighed 1325 gms., was soft and flabby, and showed slight atrophy in the prefrontal regions. No focal lesion was found on section. No infiltration was found about the vessels of the cortex. The pia showed numerous large pigmented cells, epithelial cells, and large phagocytes. Examination for tubercle bacilli was negative.

In this case also we must acknowledge failure in exact diagnosis; ante mortem difficulties remain unsolved post-mortem, or only partially solved. But the request of Meyer and Dunlap for a more careful examination of supposed paretics is justified.

The fourth case is rather unique in that a diagnosis of paresis was made in three different State hospitals. When first taken ill in New York City patient was attended by several notable neurologists, and the most of them said that he was afflicted with paresis.

The patient, J. E. T., No. 7060, born in 1860, had a history of syphilis and sexual excesses for many years; he was an expert telegraph operator earning \$60 a week; married at 36, but had no children. In 1905 he had a hemiplegic attack, but recovered in six weeks and was able to take up his work again. Following the death of his wife in 1906 he had "nervous prostration" and was treated for syphilis. He improved sufficiently to resume his work and continued till August, 1907. In October, 1907, he made two attempts at suicide and in November was admitted to Willard State Hospital. He showed the scar of a chancre, pupils not reacting to light and only slightly to accommodation, diminished muscular strength on the left side, tremor of gait and speech, Romberg sign, falling backward and to the left, general tremor, but writing good. He was depressed and suspicious, his memory for recent past was good; poor for remote; he had hallucinations of sight and hearing and delusions of paranoid nature; he showed general deterioration and inability to collate dates. The diagnosis was general paralysis. He was discharged unimproved December 31, 1907.

He was readmitted to Utica State Hospital March 11, 1908. Pupils reacted sluggishly; gait unsteady; Romberg present; inco-ordination of arms; heightened deep reflexes; tremor of hands and speech. He was confused and restless; appreciated that a change had come over him; was depressed, with hallucinations of hearing and delusions of persecution. Memory for remote past fair, for recent very much clouded; knew the day of the week, but was otherwise disoriented for time, place and person. School knowledge and general information very deficient; retention fair. He was able to correct his delusions, but failed physically and continued depressed; was discharged improved October 26, 1908. Diagnosis: general paresis.

Readmitted to St. Lawrence State Hospital April 2, 1909. Pupils reacted to accommodation, but not to light; knee-jerks increased; Romberg present; coarse tremor of tongue; speech slurring; letters dropped in writing. Lumbar puncture positive. He was cheerful but dull, felt well and strong; mistook people; orientation was good for place and time, defective for person; insight wanting; memory

for recent and remote past poor; retention of a number good. Diagnosis, general paresis. June 28, 1909, had a convulsion and was very stupid for hours afterward. September 8th had a mild convulsion. In February, 1910, was very delusional; had a voracious appetite, soiled and wet himself, collected rubbish. October 16, 1910, left foot was extended with ankle clonus present; right ankle rigid with no clonus. He died of pneumonia January 16, 1911.

At autopsy the calvarium was heavy with abundant diploe everywhere; the pia exceedingly thick, cloudy and edematous over the vertex and the lymph spaces at the base; there was great excess of cerebro-spinal fluid; the basal vessels and their branches were much sclerosed. The frontal lobes were adherent posteriorly on the basal aspect, and there were many large granulations in the fourth ventricle. The brain weighed 1270 gms., and showed moderate symmetrical atrophy of the vertex. There was an area of softening the size of a quarter dollar, in front of, and involving, the upper part of the right central fissure. Two smaller hollowed out lesions about the size of peas were found on the inferior surface of the left cerebellar hemisphere. On section multiple focal lesions were found; the cloudiness of the pia had largely passed away. In the cerebellum the lesion of the left hemisphere was found to be very extensive, through the cortex deep into the central marrow; a lesion was found in the right hemisphere outside the dentate nucleus. In the cerebrum the left optic radiation was cut through by a small lesion. At the splenium of the corpus callosum the large area of softening on the right began as a few small brown cavities or slits; further on it widened to a thick mass of gelatinous tissue, which became superficial at the central fissure; opposite the putamen on the right was a small lesion in the white matter; opposite the posterior commissure a lesion of the left external capsule began and increased until just in front of the anterior commissure it had spread through the lenticular nucleus and destroyed the internal capsule at its genu. It continued forward in the lenticular nucleus and became very large, ending opposite the genu of the corpus callosum. There was a smaller lesion in the right external capsule and in the marrow on the right above the corpus callosum. Microscopically, the condition was cerebral syphilis.

We have here the opportunity of comparing the condition of a case of cerebral syphilis at three complete examinations by different observers, the first at two years after onset, the others at intervals of five and thirteen months. The first recorded symptom is a hemiplegia attack in 1905, recovered from in six weeks, but left-sided weakness, presumably residual, is noted in the examination at Willard State Hospital two years later. It is also noted that improvement followed antisyphilitic treatment before admission,

and that he was able to continue work till August, 1907. Of individual diagnostic signs, the pupils were small, round and contracted, did not react to light and very slightly to accommodation in November, 1907. In March, 1908, they were contracted, equal in size, reacting sluggishly. In April, 1909, they were small, the left slightly larger than the right, and reacted to accommodation but not to light; it is evident that the speech was not typical. On the first two admissions it is noted as somewhat tremulous, and on the last as slurring in variable degree; the writing on the first admission was particularly good, showing no marked tremor; on the last admission letters and syllables were dropped and though there was still little tremor many of the letters were poorly formed. Mentally, before and at his first admission, he was depressed, with confused ideas of persecution, and doubts of the reality of things. People came in and around his room at night, slammed doors, and insinuated that he was a bad character; he appreciated that a change had come over him and believed he was poisoned. On his second admission the delirious features were even more marked, but he gradually improved during residence, became contented, fairly self-controlled and interested in his surroundings. On his final admission, he showed increased deterioration, but through all his strange experiences and doubts and delusions he was always J. E. T., a telegraph operator, who had lived a bad life and was being punished for it; insofar his personality was preserved. Yet though in the light of the autopsy these features, suggesting syphilis, stand out rather prominently, I am convinced that if the man had lived and been presented here to-day, some would have felt aggrieved that the time of the conference was taken up with a plain case of paresis.

The fifth case need not detain us long. The patient, J. L. J., No. 7762, was admitted on December 31, 1910, in a moribund condition and died seven days later. He was a lumber inspector, aged 54, alcoholic, married, with no children. He had contracted syphilis several years before, and had been drinking heavily for nearly a year and doing no work. In September, 1910, he was noticed to be very forgetful and stupid; wandered aimlessly about the house; answered

questions incoherently; talked to himself continually, often expressed the idea that there were people at the door; wet and soiled his clothing. He was given 606 December 2d, without benefit. On admission, he had the rash of secondary syphilis, fixed pupils, hyperactive reflexes, inco-ordination, Romberg, difficulty in test words; spinal fluid strongly positive. Mentally, he was disoriented and slow of comprehension, with greatly impaired memory and without insight, grasp, or judgment. The case was not presented at staff meeting, but the examiner thought it probably general paralysis.

At autopsy the calvarium was light, and purple in color from congestion of the diploe; the dura showed staining of the internal surface; the pia was extremely thick, cloudy and edematous over the the vertex and in places at the base, especially the posterior part of the cerebellum, where the thickness and cloudiness were greater on the left. There was some excess of cerebro-spinal fluid; no granulations in the fourth ventricle and the tips of the lobes were not adherent. The basal vessels, especially the middle cerebrals, showed numerous very small patches of atheroma. The brain was quite firm, weighed 1335 gms., and showed considerable symmetrical atrophy. Sectioned, the left lenticular nucleus and the posterior part of the left internal capsule showed focal lesion; the right optic thalamus had a small focal lesion, as had also the right side of the upper pons. Microscopically, the condition was syphilis.

This case is not reported with the idea of attempting to justify the diagnosis, but rather as a case of acute syphilitic meningitis for comparison with the chronic form described by Dr. Dunlap. This patient had difficulty in pronouncing test words and fixed pupils. Mentally, he was profoundly toxic, disoriented, with greatly impaired memory and without insight, grasp, or judgment, but realized that he was a man of about 53 years of age, engaged in the lumber business. It was evident that acute meningitis in the secondary stage of syphilis may present practically the same mental symptoms and physical signs as certain cases occurring in the late post tertiary period, and as certain cases of paresis. This emphasizes the difficulties, which complicate a theory of specific toxic causation. We postulate a special toxin for paresis with certain selective peculiarities, we may reasonably ascribe secondary processes to the toxin of the spirochæta, and for the third form which occurs in the post paretic period of life we assume a third toxin, post et propter spirachætam. In the face of

this confusion one might be tempted to abandon theories as complicated, and assert that the anatomical condition in each is caused by the spirochæta, and that those anatomical changes which we regard as diagnostic are not themselves productive of symptoms, and may exist for years unrecognized until the limit of reserve power is reached, and the border of sanity passed; but the accompanying eye and speech symptoms, and the relative acuteness of the process forbid such an assumption. It is evident that our concepts of these organic conditions are superficial, and that much work remains to be done before we can pretend to have even a good working theory.

The sixth case illustrates certain practical difficulties that are met with in diagnosis.

F. P., No. 7795, was admitted February 18, 1911, from the Onondaga county home. He was an Italian; age uncertain, given as 62. The onset was in March, 1910; he would run away from the home, break dishes; attempted to set the building on fire; seemed confused. He was quite gray, and had some arteriosclerosis; tremor of the face and beginning cataracts; his gait was feeble and shuffling; pupils and speech normal. He was untidy and soiled himself; wandered about the ward and became lost and confused. Through an interpreter he gave senseless replies; did not know where he was; gave his age variously; was resistive and quite stupid. A diagnosis of senile deterioration was made. He continued resistive, kicking, biting, and scratching while being dressed; was noisy at night, talking loudly; someone had to follow him round to keep him out of mischief. He died of pneumonia May 25th.

At autopsy the calvarium was fairly heavy, diploe scanty. There was marked increase of cerebro-spinal fluid and the pia was thick and cloudy. The brain weighed 1050 gms.; the basal vessels were in good condition, the convolutions seemed flattened. Microscopically, the condition was paresis.

This patient was under observation five weeks and had a history of confusion for about a year. His age was given and accepted as 62; he was quite gray, with arteriosclerosis of radials, and cataracts. Apart from tremor of the face he presented none of the usual physical signs of paresis; his type of dementia suggested senility or arteriosclerosis. Yet the autopsy showed the lesions of paresis, and the microscope confirmed it.

For control and comparison I have examined the records of five other cases selected at random and proved parietic by microscopical examination. I wish to refer very briefly to the principal diagnostic signs. Unequal pupils are noted in three parietics, in one non-parietic. Irregular pupils in one parietic. The pupils did not react to light in two parietics and in two non-parietics, in one other parietic the left pupil did not react while the right did; the pupils were sluggish to light in two parietics and three non-parietics, and reacted promptly in one parietic, and two non-parietics, in one other parietic, as already stated, the right eye reacted promptly while the left did not react. The pupils were sluggish to accommodation in two parietics, and one non-parietic, in one other parietic the left pupil was sluggish. The pupils reacted promptly to accommodation in one parietic and four non-parietics, in one other parietic the right pupil reacted promptly to accommodation, while the left, as already stated, was sluggish. One parietic had total blindness from optic atrophy. Concerning speech, in two cases, both parietics, no record was obtained. Judging from the records I find parietic speech in four parietics and two non-parietics; slurring speech in one parietic and one non-parietic, and slurring and muttering speech in one non-parietic. The speech was tremulous in one non-parietic and normal in two non-parietics. Of writing there was no record in two parietics and three non-parietics. Again, judging from the records, I find parietic writing in two parietics and one non-parietic. The writing was not distinctive in one non-parietic and good in two non-parietics and one parietic.

Here is no easy road to correct diagnosis; and differentiation by means of mental symptoms noted in the case records I find yet more hopeless. The recognition of preservation or loss of personality, which I believe to be of considerable diagnostic value in cases not too much demented or too much confused, appears to pertain to a sixth sense, and like the no less real intuition of the experienced diagnostician, is difficult to explain and yet more difficult to intelligently record. As a clinician I sorrow-

fully admit that our case records are defective, even unnecessarily so; as a pathologist, I lament that paresis, like the earth in the old astronomy, still rests in space, supported only by a theory. With Byron Bramwell (*Lancet*, July 29, 1911), "I sometimes think that there is a tendency to attach too much importance to some of the instrumental and other elaborate methods of diagnosis . . . and to underestimate an all round clinical experience and knowledge."

I felt that my main gain from this investigation has been an increased charity and an unbounded humility, with some increase of insight into the difficulties of the most simple of mental diseases, and the light it may throw on more obscure types. I have had it impressed upon me that our sure path of progress leads through the organic conditions, where certain landmarks stand to guide, and that very much more careful analysis of the "plain" and "simple" cases of paresis is needed.

A COMPARISON OF THE VARIOUS METHODS OF FORMALDEHYDE FUMIGATION.*

BY DR. WM. C. PORTER,
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Perhaps an apology is due this conference for my presuming to present any information concerning so trite a subject as formaldehyde fumigation. But we have found a very simple method to be fully as efficient as many of the more cumbersome and expensive ones, and therefore venture to give a short account of our observations and experiments along this line.

The importance to hospital officers of the subject of fumigation need not be emphasized. It is a routine procedure and suggestions as to time or labor saving methods are usually welcome. No elaborate or exhaustive series of experiments have been carried out, but I believe that enough has been done to demonstrate the efficacy of the so-called "sheet method."

The best authorities agree on the following points:

- (1) That formaldehyde is beyond doubt the most powerful and the most practical disinfectant we possess for large air spaces and general work.
- (2) That formaldehyde is essentially a surface disinfectant which sometimes does, but usually does not, penetrate.
- (3) That formaldehyde acts best in the presence of a moderate degree of humidity.
- (4) That a room temperature of 60 degrees F. or higher is advisable.

Formaldehyde is usually handled in the form of a 40 per cent watery solution known as *formalin* or in a solid crystalline form known as *paraformaldehyde* or *paraform*.

The liberation of active formaldehyde from paraform is accomplished by means of heat. The solid melts at 171 degrees C. and ignites at a slightly higher temperature, at which time a compound other than formaldehyde is formed.

* Paper read at the inter-hospital meeting, held at Hudson River State Hospital, June 15 and 16, 1911.

The gas is liberated from formalin by various methods.

(1) By evaporation. When the solution is evaporated the gas is directly generated and polymerism occurs. A large number of autoclaves and generators are on the market, their principle being the overcoming, by means of pressure or the addition of calcium chlorid, this tendency to polymerism.

(2) By chemical action. The method first described by Evans and Mussel is extensively used at the present time. For each 1000 cubic feet of air space $6\frac{1}{2}$ ounces of potassium permanganate is added to one pint of formalin. The gas is liberated immediately.

The State Commission in Lunacy has recently recommended another method: For each 1000 cubic feet of air space 16 ounces of formalin is mixed with $1\frac{1}{2}$ ounces of concentrated sulphuric acid. In a large butter crock is placed 32 ounces of fresh quicklime over which the acid and formalin are to be poured.

(3) The so-called "sheet method:" This is not original with us, but I do believe that it is not as generally used as its efficacy and simplicity deserve. For each 1000 cubic feet of air space a pint of formalin is used to saturate a sheet. Our custom is to lay a folded sheet in a large bowl and to pour the solution into same, leaving the corners of the sheet dry. This is then grasped by two persons and laid over a wooden horse placed before a radiator. In winter a small jet of steam being allowed to escape from the air valve of the radiator furnishes the room with the requisite humidity. For each 1000 cubic feet a separate sheet is used. Discarded rubber blankets are spread under the horse.

At various times I have used all these different methods of formaldehyde fumigation at our tubercular cottages and none has afforded so much satisfaction and so little trouble as the method just described. In order to demonstrate that it is as efficient as the other methods in use, a series of experiments was made.

Cotton strings saturated with a bullion culture of *Staphylococcus pyogenis aureus* were placed in various parts of

the room and these various methods of disinfection were carried out.

After fumigation for 48 hours these strings were immersed in bullion culture-media and placed in a thermostat for 48 hours. A clear bullion at the expiration of that time was regarded as a negative result.

Six sets of infected strings were used, and in each series four strings were placed in various locations in a room containing approximately 1000 cubic feet of air space.

String (1) Exposed openly near the ceiling.

String (2) Exposed openly near the floor.

String (3) Suspended inside a rolled mattress.

String (4) Inside a folded newspaper.

In experiment (1) a Novy generator was used. Result: Bullion cultures containing strings 1, 2, 3, were negative, 4 was faintly positive.

Experiment (2) Potassium permanganate method: Strings 1, 2, and 3 were negative. String 4 was markedly positive.

Experiment (3) Sulphuric acid-quicklime method, Strings 1, 2, and 3 were negative. String 4 was markedly positive.

Experiment (4) Sheet-method (24 hours exposure): Strings 1, 2, and 3 were negative. String 4 was positive.

Experiment (5) Sheet-method (48 hours exposure): Strings 1, 2, 3 and 4 were negative.

Experiment (6) Sheet-method (48 hours exposure): String 1, placed inside a rolled paper, was positive. String 2, covered with dust from the rubbish box and placed in a corner of the room, was negative. String 3, placed in a pocket of a patient's coat and hung on the door, the lapel being inside the pocket, was negative. String 4, placed inside a drawer of a stand, was positive.

Conclusions: The result of this preliminary series of experiments seems to show that the so-called "sheet-method" of formaldehyde fumigation is fully as efficient as any of the older methods, is attended by no danger of fire, and is less expensive and less cumbersome.

THE STERILIZATION OF DEFECTIVES.*

BY CLARENCE P. OBERNDORF, M. D.,
Manhattan State Hospital.

Although castration and vasectomy of the feeble-minded, criminal and defective, for the prevention of procreation has long occupied the attention of the heads of institutions dealing with such classes in the Western States, notably in Indiana and Kansas, and has led to legislation in many others very recently, it is being brought more prominently to our notice here in the East through the New Jersey legislature and the recent introduction of a bill of eugenic purport into the New York legislature.

This bill, which has been presented in both the Senate and Assembly (*Survey*, March 23, 1912), calls for the addition of four sections to the public health law creating a board of examiners, consisting of three members to be appointed by the governor, one a surgeon, one a neurologist and one a practitioner of medicine. Each must have had at least ten years' experience in the practice of his specialty. The purpose of this commission is to examine the feeble-minded, epileptic, criminal and other defective inmates in the State hospitals for the insane, State prisons, reformatories, charitable and penal institutions and to perform operations to prevent procreation by such persons when, in the board's judgment, their offspring would inherit a tendency to crime, insanity, etc. Persons so examined and to be operated upon may be represented by counsel.

Sharp (*Journal of the American Medical Association*, December 4, 1909) lauds the procedure of vasectomy in preference to the segregation of these individuals on the ground that the latter method is more costly, less certain and means "life imprisonment for a large army of men and women who should be given the opportunity to enjoy life and liberty." He mentions the castration of 48 boys at the suggestion of the superintendent of a Kansas institu-

* Reprinted from *American Journal of Urology*, May, 1912.

tion for the feeble-minded, but considers that operation productive of too grave nervous and mental disturbances, in addition to being more serious surgically than vasectomy. Unfortunately the fate of the 48 individuals castrated some 14 years ago in Kansas has not been followed, though by chance I happened to see one who was admitted to the Manhattan State Hospital about one year ago and who at that time from his own report did not believe that the operation had benefited him.

Sharp had in 1909 performed the operation of severing the vas on 500 male inmates of the Indiana Reformatory and concludes that it not only acts as a protection to the community, but has a decidedly beneficial effect upon the mentality and morality of a very large percentage of the individuals. He remarks paradoxically that he "heartily endorses castration as additional punishment for certain offenses." This attitude is certainly at variance with the fundamental principles of such operations, for while sterilization of criminal defectives should be available as a eugenic measure in certain cases, it should in no sense be regarded as a punitive measure but rather as a prophylactic sacrifice on the part of the defective individual to society at large. The injustice of *punishing* in such a manner a defective for a deficiency over which he has no control savors of the middle ages and could be paralleled by the enucleation of the eye for "Voyeurs" or amputation of the penis for exhibitionists.

The problems actually encountered in the execution of a sterilization law have been vividly revealed through the observations of Oberholzer ("Kastration and Sterilisation von Geisteskranken in der Schweiz." Von Dr. Emil Oberholzer, *Juristisch-psychiatrische Grenzfragen*, Vol. 8, No. 1 to 3) among the insane in the asylum of Burghölzli, Switzerland. He reviews 19 cases, 15 women, of whom four were castrated and four sterilized, and four men, of whom three were castrated. One woman was first sterilized and later castrated. The other cases are reported on account of the analogous conditions which existed although no operations were undertaken.

As Oberholzer's cases are the first where the details are presented, the individual's rights carefully considered and where in many cases the end results are recorded, an abstract of some of them (freely translated from Rüdin's critical review, *Archiv für Rassen-und Gesellschafts-Hygiene*, Vol 8, No 6, page 821) seems worth while, for they admirably demonstrate the delicacy of the social aspect of the procedure.

The individualistic aspect: Among the women, infanticide figured four times as a consideration. In one case, a feeble-minded girl, who had frequently indulged in sexual intercourse and who had been previously impregnated by her brother-in-law, was "assaulted" (she stated that she was unable to resist because "she had a basket in one hand and a piece of bread in the other") and subsequently delivered a child which she drowned in a basin of water. As she could not be punished on account of her mental weakness, she was sent to the insane asylum where sterilization was proposed.

The commission having jurisdiction over such cases advised against such a procedure. While it admitted the slight danger and great advantages of such an operation and also that "the mentally and physically defective progeny which as a rule is born by a feeble-minded woman would be prevented," the possibility for intercourse would not be destroyed and that "it is the duty of the State to protect the girl against future assaults." It concludes that the operation "would be permissible if only the question of infanticide were at stake, but it is necessary to go beyond that, namely, to insure the protection of the victim from prostitution by placing her in a closed institution." Oberholzer comments that if that alone be the object of the State, the girl might be adequately cared for in the "poor-house," but that impregnation could only be assuredly avoided by sterilization.

In spite of the adverse opinion of the commission, the court was willing to permit the operation, provided that the patient, her father and State Board of Guardians for the feeble-minded, would consent. While the first two assented,

the committee of guardianship refused on the grounds that it inflicted "unnecessary hardship upon the patient;" that mental deficiencies were not necessarily transmitted to one's descendants; that detention in the poorhouse would answer all requirements and that if the patient fully appreciated the nature of the operation she might flatly refuse. In regard to this last phase of the problem Rüdin pertinently remarks that while the refusal might be made by the individual if she fully realized the purport of the operation, her opinion would be inconsequential on account of her defective judgment.

As to the transmission of defects Rüdin asserts that even if the chances were the same in normal and defective persons, the argument in this particular case is irrelevant, as the object of the sterilization was the prevention of infanticide and criminality. To cap the climax the overseer of the poor maintained that it did not fall within the domain of the "poorhouse" to care for defective criminals and so the patient remained in the insane asylum.

In another case, a 15 year old girl, a "moral idiot" who since the age of 13 had shown sexual abnormalities (incest with her brother) and had acquired a venereal infection, no operation was undertaken in view of the grave results which it was thought might follow castration at the age of puberty. While sterilization might have been undertaken to prevent conception, this was apparently not considered, for the castration would have been undertaken merely with the idea that it might lessen the patient's sexual cravings. It is suggested that in a case of this kind, an unilateral oöphorectomy with transplantation of the other ovary or sterilization with some plastic operation for narrowing the vagina with the idea of making intercourse impossible, might have been undertaken.

In connection with this case Oberholzer points out that the operation could have been performed if the guardian of the child had desired it, notwithstanding the physician's caution as to possible deleterious results. He asks what justification the physician and the guardian would find for the operation if in the hypothetical case that this individual,

after reaching majority and being a free agent (for as a moral imbecile she would not be insane under the law) should resent her sterility and impotence and seek legal redress by suit against the instigators and performer of the operation.

Cases castrated: All of the four women in whom castration was undertaken were confronted with the prospect of life-long confinement and all were released for shorter or longer periods following the operation. The physical disturbances which might have been expected did not manifest themselves in any of them. The first case died of a purulent peritonitis which followed the laparotomy; the second seemed to improve temporarily but the former states of excitement recurred; in the third there was no effect on the mental state and in the fourth there was a recurrence of the psychosis which necessitated her return to the asylum, but in 1908 she was again released, and has not been readmitted since.

The condition for which surgical interference was advanced and the results of the operation in the four male cases is as follows:

CASE 1. A man, who on account of uncontrollable sexual longings and perversions, eagerly desired operation, submitted to castration, which resulted not only in enabling him to refrain from perverse practices (especially homosexuality) but from other breaches of the law of which he had previously been guilty. Shortly after castration, however, an inexplicable, though transient anxiety state, with vague ideas of reference, developed in the patient.

CASE 2. An alcoholic delinquent, with very strong sexual abnormalities, was castrated at his own request, but the operation was ineffectual in diminishing his sexual phantasies. He was permitted to leave the hospital on the ground that he was no longer a social menace, but his psycho-sexual desires continued unabated. Failure to have erections in response to psycho-sexual stimulation and also his impotency were a great and constant source of irritation to him.

CASE 3. A worthless, criminal imbecile permitted the operation for testicular neuralgia. Notwithstanding his comparatively advanced age of 34 at the time of the castration, physical changes soon occurred, so that at the age of 41 he had the appearance of a youth of 20, with a feminine distribution of adipose deposits, which persisted in spite of a generalized emaciation, and with a general diminution of the hairy growth. The operation in no way affected his mental state, for although physically impotent, his psychic cravings were not lessened.

He indulged in copulation with his mistress, but, curiously enough, is said not to have regretted the operation. Some years after the operation he developed hemorrhages from the urethra every six weeks, with general physical and mental disturbances such as women experience at the menstrual periods.

CASE 4. In this last instance, which concerned a sexually abnormal, ethically defective youth, whom it was found necessary to admit to the insane asylum at the unusually early age of 8, and in whom a gloomy prognosis was offered, no operation was undertaken because his offenses against society had not been sexual transgressions (robbery). In spite of the psychiatric pessimism and the failure to perform castration, this boy subsequently served in the Swiss army, abandoned his criminal career and has since been working industriously, thoroughly ashamed of his former career.

A record of this kind demonstrates most forcibly that maturity of the intellect, which is sometimes retarded, may do much to ameliorate severe ethical deficiencies and for this reason alone castration should not be undertaken before the individual's mental development is fairly firmly fixed. Moreover, it should cause us to be more critical when we read of marked mental improvement attributed as a result of castration.

Summary. In concluding his article Oberholzer states: "I wished to show that where the prevention of procreation is desired, sterilization is the only justifiable procedure, for aside from the advantages to humanity at large, it means an abstention from crime and the prevention of unhappiness and misery for future generations. Furthermore, the bar must begin to recognize the increasing value to the community of a healthy posterity and to evince a greater regard for the right of the child itself to sound health, which may be accomplished by the legal recognition of sterilization. Legislation will also best establish the restrictions for its application and prevention of abuse."

A scrupulously unbiased statement of carefully followed cases of this kind from one who evidently believes in the restricted value of the operation for racial improvement, is more enlightening than the statistical record of thousands of incompletely investigated instances, where the indications and results have not been determined, but it also emphasizes that the operative method of eugenics will not entirely solve

our problems. Certainly in very many instances the parents of the individual considered as a subject for sterilization would not have fallen within the realm of surgical eugenics at the time that the defective offspring was conceived—unless the indications for interference be extended far beyond our present suggested limitations. As a matter of fact, at the present time, with given parents of a definite constitutional make-up we can do little more than predict that the offspring is likely to inherit a certain proportion of his parents' traits.

What is now required is not so much the precipitate enactment of laws which may subsequently be repealed, found inadequate or allowed to fall into disrepute, but rather State appropriation for the investigation of the still nebulous problems of heredity, and a more exact determination of the type of individual in whom the more strenuous methods for the prevention of reproduction will represent a eugenic advance.

MINUTES OF QUARTERLY CONFERENCE.

OCTOBER, 1911.

Minutes of the conference of State Hospital Superintendents and representatives with the State Commission in Lunacy, held at the Binghamton State Hospital, Binghamton, N. Y., October 6, 1911.

Present—

Commissioners BISSELL and SANGER.

Dr. AUGUST HOCH, Director of the Psychiatric Institute.

ELBERT M. SOMERS, M. D., Medical Inspector of the State Commission in Lunacy.

Utica State Hospital, HAROLD L. PALMER, M. D., Medical Superintendent.

Willard State Hospital, ROBERT M. ELLIOTT, M. D., Medical Superintendent.

Hudson River State Hospital, CHARLES W. PILGRIM, M. D., Medical Superintendent.

Middletown State Homeopathic Hospital, MAURICE C. ASHLEY, M. D., Medical Superintendent.

Buffalo State Hospital, ARTHUR W. HURD, M. D., Medical Superintendent.

Binghamton State Hospital, CHARLES G. WAGNER, M. D., Medical Superintendent.

St. Lawrence State Hospital, RICHARD H. HUTCHINGS, M. D., Medical Superintendent.

Rochester State Hospital, EUGENE H. HOWARD, M. D., Medical Superintendent.

Gowanda State Homeopathic Hospital, DANIEL H. ARTHUR, M. D., Medical Superintendent.

Long Island State Hospital, IRA O. TRACY, M. D., Acting Medical Superintendent.

Kings Park State Hospital, WILLIAM A. MACY, M. D., Medical Superintendent.

Manhattan State Hospital, WILLIAM MABON, M. D., Superintendent and Medical Director.

Central Islip State Hospital, GEORGE A. SMITH, M. D., Superintendent and Medical Director.

Mohansic State Hospital, ISHAM G. HARRIS, M. D., Medical Superintendent.

Mr. FRED J. MANRO, Manager, Willard State Hospital.

Mr. JERVIS LANGDON, Mr. HARRY N. GARDNER and Mrs. KATHARINE ELY, Managers, Binghamton State Hospital.

Mr. ANDREWS of the State Charities' Aid Association.

Drs. T. I. TOWNSEND, EDWARD GILLESPIE, R. M. CHAPMAN, H. I. PARTRIDGE, R. R. WILLIAMS, J. C. PARTRIDGE, C. H. BELLENGER and E. WALKER of the Medical staff of the Binghamton State Hospital.

Commissioner BISSELL in the chair.

The CHAIRMAN: In the absence of the President of the Commission, Dr. Ferris, who is unfortunately unable to be present on account of the death of his father, which occurred yesterday, it becomes my duty, as the second member of the Commission, to preside over your deliberations. I do so with a good deal of hesitation because I am so new with this work, and I hope that you will bear with me and be indulgent because I am a new member.

It seems to me the first business of the meeting might properly be the appointment of a committee to draft resolutions of sympathy on account of the loss that Dr. Ferris has suffered.

Dr. PILGRIM: I move that a committee of three be appointed by the chair to draft suitable resolutions to be presented to Dr. Ferris, expressing the sympathy of this body on the occasion of the death of his father.

Which motion was duly seconded and unanimously prevailed.

The CHAIRMAN: As such committee, I will appoint Drs. Pilgrim, Hurd and Mabon.

This of course is the statutory meeting—meetings being required by the statute of the superintendents and the Commission in conference together with a number of the boards of managers four times a year. The first on the programme is the reading of a paper which has been prepared by Dr. C. Macfie Campbell, now of Bloomingdale Hospital, and formerly of the Psychiatric Institute, on "Focal Symptoms in General Paralysis". This paper will be read by Dr. Hutchings.

The paper will be published in the August number of the BULLETIN.

The CHAIRMAN: Any report from committees?

Dr. HUTCHINGS: The Committee on Statistical Forms has no formal report for this meeting. I merely wish to state that we have continued our work along the line that we have heretofore followed and also to call the attention of the Chairman to the fact that there is a vacancy existing upon this committee owing to the death of Dr. Doran. It would be desirable to have this vacancy filled.

The CHAIRMAN: That brings up the question of announcing the death of Dr. Doran to this conference. While the doctor had not been very well for some few days, his death came very unexpectedly and was a great shock to the Commissioners and to his associates generally. The President of the Commission has already arranged to appoint Dr. Somers to the vacancy on the Committee on Statistical Forms.

Commissioner SANGER: I move that a committee of three superintendents be appointed to prepare a resolution of sympathy to be forwarded to Dr. Doran's widow and transmitted to the board of managers of the hospital.

Which motion was duly seconded and carried.

The chair appointed as such committee the following: Dr. R. H. Hutchings, Chairman, Dr. H. L. Palmer, Dr. E. H. Howard.

The CHAIRMAN: This meeting is held to consult with the Commission with reference to matters relating to the care and operations of the State hospitals and particularly with reference to the care and treatment of the insane. That is the language of the statute, and since I have been a member of the Commission, I have heard the statement made several times that these conferences would probably accomplish a good deal more if they could go into executive session and not have quite so much formality in their proceedings. Of course we are benefited by the papers which are read, and they become very valuable as records to be used hereafter and printed, but there are a good many who attend here, managers and superintendents, who would not speak quite so freely on subjects that ought to be communicated to the Commission, if all the remarks were taken down and for-

mally made a record of the conference. Commissioner Sanger and I have thought it would be wise to have the conference go into executive session, that the stenographer be directed to take no notes of the proceedings and that the managers and superintendents be invited to express themselves freely regarding the needs of the service.

On motion of Commissioner Sanger, the conference went into executive session for the purpose of discussing the questions and matters imposed upon it by the conference.

During the executive session, it was, on motion, duly seconded, VOTED to invite the Board of Alienists to attend the next conference.

After a discussion of needed changes in the Insanity Law, it was, on motion,

VOTED, that a committee of superintendents be appointed by the chair to confer with the Commission as to the various amendments that ought to be proposed to the Insanity Law at the next session of the Legislature.

As such committee the chair appointed the following superintendents: Dr. Mabon, Chairman, Dr. Macy, Dr. Wagner.

A discussion of the use of the Red Cross emblem by the graduate nurses in the State hospital service was had. It was, on motion,

VOTED, that the Red Cross be discontinued at once in hospitals for the insane in this State until such time as it may be used in conformity with the rules of the National Red Cross Association.

The Chairman made formal announcement to the conference of the appointment of the Central Purchasing Committee, as follows: Dr. George A. Smith, Chairman, Dr. Maurice C. Ashley, Dr. Arthur W. Hurd, Mr. C. A. Mosher, Mr. Edward S. Graney, Mr. F. A. Wheeler, Secretary.

The following resolutions were presented:

WHEREAS, the conference of the State Commission in Lunacy, the managers and superintendents of the State hospitals assembled at Binghamton the sixth day of October, nineteen hundred and eleven, have learned with regret of the death of the father of Dr. Albert Warren Ferris, President of the State Commission in Lunacy, it is hereby

Resolved, That we tender to Dr. Ferris and family our heartfelt sympathy in their bereavement.

Be it further *Resolved*, that the Secretary be directed to convey our expressions of sorrow to him, and that this resolution be spread upon the minutes of the conference.

CHAS. W. PILGRIM,
ARTHUR W. HURD,
WM. MABON,

Committee.

WHEREAS, The members of the conference have suffered the loss by death, of one of their associates, Dr. Robert E. Doran, Medical Superintendent of the Long Island State Hospital, be it

Resolved, That we tender to Mrs. Doran and family our deep sympathy for the great loss which they have sustained, and be it further

Resolved, That a committee be appointed by the chair to draw resolutions expressive of our deep appreciation of his high character and faithful service in his chosen field, and to prepare an obituary notice, the same to be published by the committee in the official organ of the State Commission in Lunacy, and such other journals as the committee may direct.

Dr. R. H. HUTCHINGS,
Chairman,

Dr. H. L. PALMER,
Dr. E. H. HOWARD,

Committee.

The resolutions were unanimously adopted by the conference.

The CHAIRMAN: As directed by the resolutions regarding the death of Dr. Doran, I would announce the appointment as a committee to draft resolutions on the death of Dr. Doran, and prepare an obituary notice for our minutes, the following members of the conference: Dr. R. M. Elliott, Chairman, Dr. W. A. Macy, Dr. E. M. Somers.

On motion, the conference adjourned.

LEWIS M. FARRINGTON,
Secretary of Conference.

MINUTES OF QUARTERLY CONFERENCE.

DECEMBER, 1911.

Minutes of the conference of State hospital superintendents and representatives with the State Commission in Lunacy, held at the Manhattan State Hospital, Ward's Island, New York City, December 19, 1911.

Present—

Commissioners FERRIS, BISSELL and SANGER.

Dr. AUGUST HOCH, Director of the Psychiatric Institute.

Drs. THOMAS W. SALMON, GEORGE B. CAMPBELL, and WM. E. SYLVESTER, the Board of Alienists under the State Commission in Lunacy.

Utica State Hospital, HAROLD L. PALMER, M. D., Medical Superintendent.

Willard State Hospital, ROBERT M. ELLIOTT, M. D., Medical Superintendent.

Hudson River State Hospital, CHARLES W. PILGRIM, M. D., Medical Superintendent.

Middletown State Homeopathic Hospital, MAURICE C. ASHLEY, M. D., Medical Superintendent.

Buffalo State Hospital, ARTHUR W. HURD, M. D., Medical Superintendent,

Binghamton State Hospital, CHARLES G. WAGNER, M. D., Medical Superintendent.

St. Lawrence State Hospital, JOHN R. ROSS, M. D., Second Assistant Physician.

Rochester State Hospital, EUGENE H. HOWARD, M. D., Medical Superintendent.

Gowanda State Homeopathic Hospital, DANIEL H. ARTHUR, M. D., Medical Superintendent.

Long Island State Hospital, IRA O. TRACY, M. D., Acting Medical Superintendent.

Kings Park State Hospital, WM. AUSTIN MACY, M. D., Medical Superintendent.

Manhattan State Hospital, WILLIAM MABON, M. D., Superintendent and Medical Director.

Central Islip State Hospital, GEORGE A. SMITH, M. D., Superintendent and Medical Director.

Mohansic State Hospital, ISHAM G. HARRIS, M. D., Medical Superintendent.

- Dannemora State Hospital, CHARLES H. NORTH, M. D., Medical Superintendent.
- Bloomington Hospital, WILLIAM L. RUSSELL, M. D., Medical Superintendent.
- Rev. EDWARD H. COLEY, Manager, Utica State Hospital.
- Miss BERTHA PECK, Manager, Willard State Hospital.
- Miss CATHERINE A. NEWBOLD, Mr. PETER H. TROY and Mr. FRANK B. LOWN, Managers, Hudson River State Hospital.
- Mr. JERVIS LANGDON and Mr. HARRY N. GARDNER, Managers, Binghamton State Hospital.
- Dr. JOHN J. ROBINSON, Manager, St. Lawrence State Hospital.
- Dr. EDWIN H. WOLCOTT, Manager, Gowanda State Homeopathic Hospital.
- Miss HELEN M. GOULD and Dr. WILLIAM D. GRANGER, Managers, Mohansic State Hospital.
- Dr. GUSTAV SCHOLER, Mrs. JULIA KENT WEST and Dr. WHITMAN V. WHITE, Managers, Manhattan State Hospital.
- Mrs. MARY M. ACKERLY, Manager, Kings Park State Hospital.
- Mr. RICHARD W. BAINBRIDGE, Manager, Long Island State Hospital.
- Mr. JAMES MACGREGOR SMITH, Miss MARY E. RICHMOND and Mr. ROBERT HIBBARD, Managers, Central Islip State Hospital.
- Miss MARY VIDA CLARK and Mr. E. S. ELWOOD, Assistant Secretaries of the State Charities' Aid Association.
- Dr. C. FLOYD HAVILAND, First Assistant Physician, Kings Park State Hospital.
- Drs. G. H. KIRBY, H. C. EVARTS, J. T. W. ROWE, D. S. SPELLMAN, W. C. GARVIN, F. R. HAVILAND, J. R. KNAPP, R. P. FOLSOM, E. M. POATE, E. S. HELLWEG, M. SCHUMAN, C. B. OBERNDORF, L. E. BISCH, S. BROWN, H. L. DAY and C. I. LAMBERT of the Manhattan State Hospital staff.

Commissioner FERRIS in the chair.

The CHAIRMAN: The conference will come to order. Superintendent Mabon has a statement to make.

Dr. MABON: Upon the adjournment of this conference this morning, there will be an exhibition of work, which has been done by the patients, at one of the new cottages, following which, at one o'clock, luncheon will be served.

The CHAIRMAN: As the minutes of the last conference have been published in the BULLETIN, following our established custom, they will not be read but will stand approved, if none objects.

I will call first upon Dr. Mabon, chairman of the special committee to suggest amendments to the Insanity Law. I

will say that Dr. Mabon's entire committee met at No. 1 Madison Avenue yesterday and conferred with the Commission concerning these amendments which were all approved by the Commission, after some changes and additions were made.

MEMORANDA RELATING TO THE ACTION OF THE COMMITTEE APPOINTED BY THE COMMISSION TO REPORT ON CHANGES THAT APPEAR DESIRABLE IN THE INSANITY LAW.

Dr. MABON:

This committee has held several meetings, the result of which has been recommendations as follows:

Section 45, paragraph 8, to be changed so that the law shall read: "Shall establish at least two meetings of the medical staff each week," etc., in place of "Hold at least two meetings weekly with the medical staff." (This recommendation was approved by the Commission and the conference at the Ward's Island meeting.)

Amend Section 17 so as to read: "The cost of such buildings as are to be occupied by patients erected on the grounds of existing State hospitals, including the necessary equipment for heating, lighting and ventilating, shall be determined by the State Commission in Lunacy." But that if this liberty of action is objected to by the Legislature, that the reading shall be as follows: "Shall in no case exceed the proportion of \$750 for the ordinary quiet or infirm patients, \$1,000 for the disturbed, maniacal or dangerous class where single rooms are needed in large number, and \$1,200 for the acute and reception services, but that these figures are not to be considered as including furniture or such special equipment as hydrotherapeutic or electrical apparatus, etc. Laundry, dry rooms, workshop, kitchens or industrial buildings of any kind are not to be considered as included in the per capita cost as herein stated. (Approved by the Commission and the conference.)

Amend Section 65 so that it shall provide for the preparation of plans by architects employed by the State Commission in Lunacy, subject to the approval of the Gov-

error, and providing for inspection by the State Architect in addition to such other inspection as the State Commission in Lunacy may designate. (Approved by the Commission and the conference.)

Amend Section 50 of the Insanity Law so that the schedule of wages shall be made by the State Commission in Lunacy, or, if this can not be done, the schedule recommended by the committee, of which Dr. Wagner was chairman, in April, 1909, a copy of which is annexed to this report, shall be substituted for the schedule now in operation. (Approved by the Commission and the conference.)

Amend Section 49, so that in place of the limitations on the maintenance of officers as now provided for, the law shall read: "Maintenance shall be allowed to superintendents, first assistant physicians and stewards and their families, and where quarters are available in the judgment of the superintendent, such maintenance may also be allowed physicians in the grades below the grade of first assistant physician, subject to the approval of the State Commission in Lunacy. Such families shall consist of the wives and children of such officers." (Approved by the Commission and the conference.)

Amend Section 45, paragraph 2, by eliminating the clause "But the appointment of a steward by such superintendent shall be approved by the Commission before taking effect, and such steward shall not be removed without the consent in writing, of the Commission." (Approved by the Commission and the conference.)

Amend the Insanity Law so as to confer power on the Commission to fix rates, etc., and to compel the removal of private patients to private institutions when such removal is deemed advisable by the superintendent, and approved by the Commission. (Approved by the Commission and the conference.)

Amend the law relating to emergency commitments so that they shall be effective for ten days instead of five, and that the time during which a patient may be admitted to a State hospital after the signing of the order, may be increased to ten days from and inclusive of the date of the

order, instead of five days as now allowed. (Approved by the Commission and the conference.)

Amend the law so that the non-liability of the hospital for the expenses of patients while on parole shall be fixed by statute, and that the liability be placed upon the friends of the patient, or the local authorities. (Approved by the Commission and the conference.)

Amend the law so that a committee of superintendents shall be empowered to make the rules for the management of the State hospitals, subject to approval by the conference and the State Commission in Lunacy, and that such additional house rules as individual superintendents may desire, shall be printed in connection with the general rules. (Approved by the Commission and the conference.)

It is further recommended, that in view of the extreme difficulty in securing competent medical officers for the State hospital medical service and of retaining them when secured, on account of the low salaries paid, the uncertainty of promotion provided for and the unsatisfactory arrangements as regards accommodations, allowances, etc., the following schedule of salaries is strongly recommended for adoption.

It is further recommended that immediate action be taken by the Commission looking to the approval of this schedule and securing the approval of the proper State officers so that the schedule may be made effective January 1, 1912. Such action may be had without reference to the Legislature.

Dr. Wagner, the chairman of the committee, will supplement this report.

PROPOSED SCHEDULE FOR OFFICERS' SALARIES.

Medical interne.....	\$1,000
Eligible for appointment for one year only, that is, they must come up for the first examination for junior assistant after their year's service.	
Assistant physician.....	from \$1,200 to \$1,600
First year, \$1,200; 2d, \$1,300; 3d, \$1,400; 4th, \$1,500; 5th, \$1,600.	
With one year's experience either in a State hospital as interne, or general hospital as resident.	

Senior assistant physician..... from \$1,800 to \$2,200
 First year, \$1,800; 2d, \$1,900; 3d, \$2,000; 4th, \$2,100;
 5th, \$2,200.

Promotion examination after three years' service as assistant physician. After passing the examination for promotion physicians should receive the promotion called for by the examination in the hospital in which they happen to be irrespective of vacancies. This would tend to permanency of service and would prevent one superintendent from crippling the service of another.

First assistant physician and clinical director... from \$2,600 to \$3,000
 First year, \$2,600; 2d, \$2,700; 3d, \$2,800; 4th, \$2,900;
 5th, 3,000.

Promotion examination after two years' service as senior assistant. When there are more than 3,000 patients there may be two first assistants.

Medical superintendent..... from \$3,500 to \$6,000
 With \$100 increase each year until \$6,000 is reached.

NOTE.—This provision is not to apply to superintendents now receiving the maximum salary.

Retirement of resident officers at the age of 65 shall be discretionary with the State Commission in Lunacy.

Woman assistant physician..... from \$1,200 to \$1,800
 Increasing from the minimum to the maximum at the rate of \$100 each year.

Pathologist, after examination, may be classed as senior assistant.

Steward..... from \$2,000 to \$2,500
 First year, \$2,000; 2d, \$2,100; 3d, \$2,200; 4th, 2,300;
 5th, \$2,400; 6th, \$2,500.

Increasing from the minimum to the maximum at the rate of \$100 each year.

(Approved by the Commission and the conference.)

It is recommended by the committee that the State Commission in Lunacy shall bring to the attention of the Legislature in the strongest possible manner, the overcrowded condition of the State hospitals and the necessity of additional accommodations, either by the enlargement of existing institutions or the creation of new ones.

CHARLES G. WAGNER,
Secretary.

NEW YORK, December 18, 1911.

PROPOSED SCHEDULE OF SALARIES AND WAGES.

1. ADMINISTRATION DEPARTMENT.

Position.	Wages per month.			
	Minimum.		Maximum.	
Apothecary			(\$75.00)	\$85.00
Man stenographer	*(\$62.50)	\$70.00	(75.00)	80.00
Woman stenographer	(50.00)	55.00	(62.50)	68.00
Watchman			(43.75)	50.00
Policemen			(43.75)	50.00
Barbers	(37.50)	45.00	(50.00)	55.00
Coachman	(50.00)	55.00	(56.25)	60.00
Drivers			(31.25)	33.00
Pages and messenger boys....	(17.50)	18.00	(22.50)	23.00

Increase of wages from minimum to maximum shall be made at the rate of two dollars per month for each six months of continuous service.

2. FINANCIAL DEPARTMENT.

Position.	Wages per month.			
	Minimum.		Maximum.	
Bookkeeper	(\$87.50)	\$95.00	(\$100.00)	\$105.00
Accountant	(75.00)	80.00	(87.50)	90.00
Voucher and treasurer's clerk.	(50.00)	55.00	(62.50)	70.00
Storekeeper:	(50.00)	55.00	(62.50)	70.00
(In hospitals having over 2,000 patients)		70.00		85.00
Man stenographer	(62.50)	70.00	(75.00)	80.00
Woman stenographer	(50.00)	55.00	(62.50)	68.00

Increase of wages from minimum to maximum shall be at the rate of two dollars per month for each six months of continuous service.

3. SUPERVISORS.

Position.	Wages per month.			
	Minimum.		Maximum.	
Chief supervisors, men	(\$50.00)	\$55.00	(\$62.50)	\$68.00
Chief supervisors, women....	(43.75)	50.00	(56.25)	62.00
Supervisors, men	(43.75)	50.00	(56.25)	62.00
Supervisors, women	(37.50)	43.00	(50.00)	55.00

Increase of wages from minimum to maximum shall be at the rate of two dollars per month for each six months of continuous service.

4. NURSES AND ATTENDANTS.

Position.	Wages per month.			
	Minimum.		Maximum.	
Charge nurses, men.....	(\$35.00)	\$40.00	(\$41.25)	\$47.00
Charge nurses, women.....	(28.75)	34.00	(35.00)	40.00
Nurses, men.....	(31.25)	35.00	(37.50)	43.00
Nurses, women.....	(25.00)	30.00	(31.25)	35.00
Charge attendants, men.....	(31.25)	35.00	(37.50)	43.00
Charge attendants, women....	(25.00)	30.00	(31.25)	35.00
Attendants, men.....	(22.00)	26.00	(30.00)	34.00
Attendants, women.....	(16.00)	19.00	(22.50)	25.00
Special attendants, men.....	(37.50)	43.00	(43.75)	50.00
Special attendants, women....	(31.25)	35.00	(37.50)	43.00
Dining-room attendants, women	(17.50)	20.00	(22.50)	24.00

Increase of wages from minimum to maximum shall be at the rate of two dollars per month for each six months of continuous service. An attendant or nurse performing night service for a period of one month succeeding the first day of the month shall be entitled to two dollars per month in addition to regular wages.

Ten per cent increase per month shall be paid to nurses or attendants engaged in the immediate care of patients on wards for disturbed, untidy, tubercular, suicidal or acute cases.

5. DOMESTIC SERVICE.

Position.	Wages per month.			
	Minimum.		Maximum.	
Housekeepers.....	(\$31.25)	\$35.00	(\$37.50)	\$40.00
Waitresses and chambermaids,	(16.25)	20.00	(21.25)	23.00

Increase of wages from minimum to maximum shall be at the rate of two dollars per month for each six months of continuous service.

6. KITCHEN SERVICE.

Position.	Wages per month.			
	Minimum.		Maximum.	
Chéfs, men.....			(\$93.75)	\$95.00
Head cooks, men.....			(50.00)	55.00
Head cooks, women.....			(50.00)	55.00
Cooks, men.....			(31.25)	35.00
Cooks, women.....			(31.25)	35.00
Assistant cooks, women.....			(25.00)	30.00
Kitchen helpers, men.....	(\$25.00)		(30.00)	30.00
Kitchen helpers, women.....	(17.50)		(22.50)	25.00

7. BAKERY SERVICE.

Position.	Wages per month.			
	Minimum.		Maximum.	
Baker.....			(\$62.50)	\$68.00
Assistant baker.....			(43.74)	45.00
Baker's helpers.....			(31.25)	35.00

8. MEAT CUTTERS.

Position.	Wages per month.	
	Minimum.	Maximum.
Meat cutters.....		(\$50.00) \$55.00

In institutions having over two thousand patients the meat cutter shall receive \$68.00 per month.

9. LAUNDRY SERVICE.

Position.	Wages per month.	
	Minimum.	Maximum.
Laundry overseer		(\$62.50) \$65.00
(In institutions having over 2,000 patients).....		75.00
Laundry overseer's assistant..		45.00
Launderers.....		(\$31.25) 35.00
Head laundress.....		(31.25) 35.00
Laundresses.....		(18.75) 22.00

10. ENGINEER'S DEPARTMENT.

Position.	Wages per month.	
	Minimum	Maximum.
Chief steam engineer.....		(\$125.00) \$125.00
(In institutions having over 2,000 patients).....		130.00
Engineer's assistants, first grade.....		(75.00) 78.00
Engineer's assistants, second grade.....		(62.50) 68.00
Engineer's assistants, third grade.....		(50.00) 55.00
Electrical engineer.....		(93.75) 95.00
(In institutions having over 2,000 patients).....		100.00
Electrical engineer's assistants, first grade.....		(75.00) 82.00
Electrical engineer's assistants, second grade.....		(62.50) 68.00
Electrical engineer's assistants, third grade.....		(50.00) 55.00
Linemen.....		(43.75) 50.00
Plumbers and steam-fitters....		(75.00) 78.00
Plumbers and steam-fitters' helpers.....	(\$26.50) \$30.00	(37.50) 42.00
Firemen, eight hour shifts....		(37.50) 45.00
Firemen, twelve hour shifts...		(50.00) 65.00

Plumber and steam-fitters' helpers shall receive an increase from minimum to maximum at the rate of two dollars per month for each six months of continuous service.

11. BUILDING DEPARTMENT.

Position.	Wages per month.	
	Minimum.	Maximum.
Master mechanic.....		(\$125.00) \$130.00
Supervising carpenter.....		110.00
Head carpenter.....		(75.00) 78.00
Carpenter		(62.50) 68.00
Painters.....		(62.50) 68.00
Blacksmith		68.00
Tinsmiths.....		68.00
Masons.....		82.00

Other mechanics not classified in this department may be employed when necessary, by the day at a rate of wages to be determined, subject to the approval of the Commission. Where deemed advisable special attendants may be assigned to skilled labor in the building department.

12. INDUSTRIAL DEPARTMENT.

Position.	Wages per month.	
	Minimum.	Maximum.
Shop foreman.....		(\$56.25) \$64.00
Tailor.....	(\$50.00) \$55.00	(56.25) 64.00
Shoemaker.....	(50.00) 55.00	(56.25) 64.00

Increase of wages of tailor and shoemaker from minimum to maximum shall be at the rate of two dollars per month for each six months of continuous service. The following occupations may be provided for by detailing attendants, or special attendants, for the particular service to be performed: bath-master, bath-mistress, broommaker, brushmaker, clothing clerk, dressmakers, glaziers, mattressmaker, photographer, tailoress and upholsterer.

13. FARM AND GROUNDS DEPARTMENT.

Position.	Wages per month.	
	Minimum.	Maximum.
Head farmer....	(\$56.25) \$64.00	(\$62.50) \$68.00
(Head farmer in institutions having over 1,000 acres of land)		75.00
Dairyman.....	(43.75) 50.00	(50.00) 55.00
Farmers.....	(31.25) 35.00	(37.50) 43.00
Herdsmen.....	(31.25) 35.00	(37.50) 43.00
Gardeners	(43.75) 50.00	(50.00) 55.00
Florists	(50.00) 55.00	(56.25) 64.00
Drivers...		(31.25) 33.00
Laborers.....		(25.00) 30.00

Increase of wages from minimum to maximum, where flat rate is not specified, shall be at the rate of two dollars per month for each six months of continuous service.

Dr. WAGNER: An important correction is that all limitation as to the cost of buildings be removed from the statute. The Commission is to make the effort to have the statute so amended as to place no limit on the cost of construction of buildings of any class, but if the members of the Legislature object to that, then the limitations proposed in the recommendations of the committee are to be incorporated in the law, if possible.

At the meeting yesterday morning the committee was instructed to confer with some of the representatives of the private institutions with a view to certain amendments covering the restrictions placed by law on the admission of patients to those institutions. The committee has made arrangements to do so. At the meeting of the committee yesterday afternoon, it was moved by Dr. Macy, and carried, that the emergency commitment should be so amended as to extend the time that the commitment would hold to ten days, instead of five, giving the extra five days for the consideration of the case before it would be necessary to take steps to have the patient regularly committed, if that appeared desirable.

Another motion of Dr. Macy's was, that the admission of a patient might be had within ten days from and inclusive of the date of the order, instead of within five days, as the law requires now. This is particularly necessary in the country where long distances must be traveled oftentimes and the period of five days after the signing of the order does not give time enough to receive the order and send for the patient and bring him to the hospital. It frequently happens that new papers are necessary on account of not getting the patient to the hospital in time.

On motion, duly seconded, the report of the committee was accepted.

The CHAIRMAN: The motion to accept the report did not discharge the committee; they will be continued to complete the work.

We would like the opinions of the superintendents and the managers. I will read the heading of each recommendation briefly and ask for a vote.

The several recommendations of the committee were read by title and approved by the conference.

Dr. WAGNER: I would like to say a word in regard to the salary schedule for officers, which I think will interest the entire conference, and it is this: To use a phrase made use of by the chairman of the examination committee, of which I am a member, the situation is "simply appalling." Seventeen men came up for the second assistant physicians' examination a month ago—men who have been from two or three to ten years in the service, and out of the seventeen, twelve failed! An examination for admission to the service as junior physicians was held about a month ago and the papers were examined by the committee, of which I am the chairman. Only six men came up for this examination, whereas about two years ago twenty-eight came up, and out of the six, two failed utterly, two barely passed, and two passed creditably. One of these is at Craig Colony, where he wishes to remain, one is at Willard and two are in New York and desire to remain at Manhattan. There are something like thirty vacancies in the service at the present time, and no candidates to fill these vacancies. I mention this simply to call your attention to the necessity of having this schedule put through if possible, so as to attract capable men to the service and to hold them if we get them.

The CHAIRMAN: The next suggestion is for the emergency paper and the next is the formulation of rules and regulations governing all the employees in the service, placing that matter in the hands of a committee of superintendents, subject to the conference and to the State Commission in Lunacy.

The above suggestions were on motion duly seconded, carried.

Commissioner BISSELL: Mr. President, I think that the suggestion which has been referred to by Dr. Wagner, made in our conference yesterday, and which I think emanated from me, to the effect that we abolish all limitations as to the per capita cost of construction of buildings, has not yet been brought up. It was to be made in a supplementary

report. The reason I suggested it was because I could not see why the Legislature should say to us: "You must build for a certain number of patients, buildings that will cost five or six hundred dollars per patient." We ought to be allowed to build the right sort of buildings required for the proper care of these patients, and it ought not to depend on a per capita cost, but upon the requirements of the service. This restriction does not seem to me to be based on good sense. We go beyond the limit sometimes. I do not believe that the Legislature should insist any longer upon this limitation. There has been a change from years ago when the Legislature feared the cost of caring for the insane was going to be too great. Nowadays I do not think they look upon it that way. I think every one is now enlisted in State care and the people want us to build satisfactorily and consistently with the revenues of the State. My idea would be that we should make every effort to eliminate from the law any limitation as to per capita cost and simply have the law framed to permit the use of such funds as we need, and the State can afford to give us.

The CHAIRMAN: Is that approved by the conference?

Dr. MABON: It was the intention of the committee in preparing this report to include this, but we did not have time to incorporate it in the recommendations of the committee to the conference. It will be put in that form in our final report. Carried.

The CHAIRMAN: The discussion of the day is on "The Therapeutic Value of Occupation for the Insane," to be opened by Dr. C. F. Haviland, First Assistant Physician at the Kings Park State Hospital.

Dr. Haviland read a paper entitled "Discussion on Occupations for the Insane and their Therapeutic Value; what is now done and what, if anything further, should be done."

Printed in full in another part of this issue of the BULLETIN.

Discussion of Dr. Haviland's paper:

Dr. MABON: We have a patient, an author and illustrator, who started an art class at this institution, and he

has contributed two typewritten pages to the annual report of the Manhattan State Hospital. I thought it would be interesting for the conference to know the viewpoint of a patient on this important subject, and I beg leave to read the following contribution from him:

THE ART CLASS.

"Two years ago a nurse on Ward 45, Manhattan State Hospital, bought a box of paints for fifteen cents and gave them to a patient. With that our Art Class started, and along the same path of intended non-intention it has ambled or sauntered, galloped or meditated to a respectable success.

"It must be stated that Art has two polar definitions. The first, spelled with a capital A and regarded with awe, means a highly specialized vocation bordering on a religion; the second definition means any thing you do with combined head and hands. The last is our *Art*. It varies from water color and oil painting to making artificial flowers, or Brobdingnagian insects out of vegetables, as witness, the mighty mosquito composed of an onion, some wire, a sweet potato and crepe paper wings who has spread his pinions beneath the ward's portal for a year.

"Anything that any one can suggest is Art. No course of instruction is followed nor thought of. It would not only be unwise to attempt a definite art course, it would, in the writer's opinion, be wrong, as the function of an insane hospital is strictly to cure, alleviate or restrain the afflicted and could in no wise be extended to mean a place for education in a trade or art.

"If what is done here be curative, and perhaps, in some case, lead to such an interest that the patient will follow up such an occupation on the outside, the full value of hospital instruction has been reached.

"The purpose of our Art work is not to make material advancement in any craft, nor to force sick men into an unknown and unwelcome pursuit. There is not sufficient data as to the therapeutic value of the work to warrant a mandatory attitude. Instead, the whole effort, directed by a nurse versed as much in human nature as in handicraft, is aimed at an instant amusement for sick men, one that shall give the greatest pleasure on the slightest means, the most diversion with the least fatigue, to the end that the study and use of beauty in color, form and line, and the practice of a multitude of ingenuities and comic concerts shall once again put a healthy tissue of thought in the place of morbid fancy. The intention is to get the 'student' out at the earliest opportunity, and not to have him do something for some one else to brag of. The 'Stunt' is not encouraged.

"Talking it over' is one of the most valued features of the class. When a man has reached the point where he can argue for ten minutes

on an Art question instead of glooming in his chair with the devil of melancholia perched upon his back, he has made a definite step toward health.

"Now while the practical side, as an occupation, has been purposely put in the background, yet out of natural right conditions a quantity of saleable work has been produced, the class has been self-supporting for some time.

"Thanks to the interest and support of the superintendent, who has held up our hands from the beginning, we have been permitted to sell our product, under the strict provision that no one should be importuned to buy. The work sells well and for moderate prices, and as all the needful materials, paints, brushes, paper and the rest are cheap, we make enough to provide a proud and decent independence of State funds. The tendency to let the means overshadow the end, and thus turn what has proved to be at least a wholesome pastime, into a money making proposition, has little chance to develop.

"To try and make a big show of the thing would mean that the capable men would be overworked, the weaker brethren be neglected.

"This idea is impressed on all: That health is the issue and not the acquisition of manual dexterity.

"In conclusion this may be said: The Art class is always much smaller than it should be. There are only four active members at present. The others are at home. That is a little something that needs no headlines."

Dr. HOWARD: Mr. President, it is a great satisfaction to come here to this conference and be confirmed in the belief that these large metropolitan hospitals are traveling the broad highway that has led to success wherever proper efforts have been made along the line of occupation. So far as Rochester is concerned, it is trying to do its part and has had some degree of success along with the rest, but has nothing to brag of nor any exceptional advice to give. It is in our thought to say a little about the pupils who have so far succeeded in the class as to go to the regular industrial departments. These patients should be graduated into the regular and more suitable industries, instead of being retained as show pupils, as is the temptation, and which, unless it is guarded against, will be the result. The teachers who have seen a poor, demented creature come up into a skilful worker dislike to give up that pupil for the other industries of the hospital, and I suppose dislike much more to give up that pupil for an up-State transfer. It is a

great satisfaction to hear the doctor talk about the voluntary workers who had come north and west from the metropolitan institutions; one of the patients who undertook to come to Rochester got lost on the way and has not yet been found. Dr. Smith has made extraordinary efforts and will undoubtedly find that patient.

I think all of us could talk of our work in this line. I might say that the assistant physician who took up this work at Rochester has as the result of it been made superintendent of the Gardner Colony for the Insane in the State of Massachusetts. This promotion is a stimulus to the younger men and women on the staffs of the several hospitals. The managers came from that institution to see what he had done and appointed him superintendent because of his work and success in connection with this very class of patients that the doctor has described in this paper. If there is anything a doctor can do in the State hospital service that will bring to him proper credit and renown and enable him to climb the ladder, I think that it is well worth knowing to the end that the young men and young women in the profession may take hold of it, realizing that when they do something better than other doctors are doing it, they are quite sure to have it recognized and to make a gain for themselves, as well as helping the hospital and helping the insane.

The CHAIRMAN: Dr. Howard's well known modesty has resulted in his concealing from us the great work done under his direction and with his co-operation by his former second assistant, Dr. LaMoure. He took a dozen cases of young women, suffering from dementia præcox, and varying from sixteen or eighteen to twenty-two, all of whom were deteriorated, confused, neglectful of their persons and of their conduct, and apparently drifting into deeper and perhaps absolutely hopeless conditions; and one by one these patients were coaxed to form in line and march about the gymnasium, a basement room. After a great deal of instruction and encouragement, they were able to march, and next they were taught to sit in chairs in orderly rows and listen to the elementary instruction which a teacher

attempted to give them in some English branches. Next I think a blackboard was brought out and simple pictures were drawn and labeled and they were urged to concentrate their attention thereon. From that they were asked to answer questions by writing. I recall the case of a young girl, formerly neglectful and demented, who, after joining Dr. LaMoure's school, would not only advance, smile pleasantly and shake hands, but would respond to questions by going to the blackboard and writing her answers, although she refused to talk. The instruction was increased to include dances; then occupations for the hands, including basket weaving and other purposeful activity until the doctor had transferred neglectful, disturbed and intractable patients into the condition of desirable pleasant pupils and helpful patients on the wards. I do not know the number of patients reclaimed in this way, but it was considerable. It was only limited by the space which could be assigned for this purpose and by the attendants who could be taken from other duties to assist Dr. LaMoure.

Work along the same lines has been done at Long Island State Hospital by Dr. Dewing, by Dr. Neff, at Willard, and also at St. Lawrence and elsewhere.

Dr. TRACY: We have been carrying the work on for a number of years, at the Long Island State Hospital, gradually developing it, and I am sure it has been of benefit to the patients. What is accomplished depends a great deal upon the amount of individual attention given to the patient; and it requires, as Dr. Haviland stated, a teacher specially adapted to the work. The more individual attention the patients get, the greater will be the results accomplished.

Dr. ELLIOTT: I do not think any one will disagree with what Dr. Haviland has stated in his paper regarding the therapeutic importance of industrial occupation and the re-education of certain classes of the insane. Speaking for Willard I may say that that institution has long been noted for its industries. The hospital was founded over forty years ago, and was established with an especial view to providing industrial occupation for the patients. It was,

as most of you know, established originally for the chronic class of insane solely, and there was at that time a large tract of land owned by the State which was formerly connected with the State Agricultural College, which was abandoned as a college some years before the hospital came into existence. Accommodations for 2,000 patients were planned from the beginning, and these have not been very much enlarged, the number of patients at present being about 2,400, but additional land has been added from time to time until the amount of land under cultivation now comprises 900 acres. The outdoor work at Willard has always been of very great importance, and the institution has always had to rely in a large measure on the labor of the patients. For instance, the garden comprises over fifty acres, and in that department there are only two paid employees, the work being done chiefly by the patients. Willard has always produced its own milk, and maintains a herd of something like 180 cows in addition to young stock which is constantly coming forward, and in this department there is only one paid employee, a herdsman, who supervises the work of caring for the herd, which is done entirely by patients. The farm work is necessarily conducted with an especial view to providing the necessary provender for the herd in such a way as to minimize as much as possible the purchasing of food stuffs from outside dealers. There is also the horticultural department, comprising about 100 acres of various kinds of fruit—apples, grapes, peaches, pears, etc., which entails a vast amount of labor in its proper maintenance, and this is done mainly by patients under the supervision of a few paid employees. I mention these things to give you an idea of the extent to which we are obliged to rely upon our patients to get the necessary work accomplished. The indoor work, such as the making of clothing, bedding, shoes, baskets and brooms is not very different from the industrial departments to be found in the other State hospitals. These afford useful occupation for a large number of patients of both sexes, and there is, of course, in addition the laundry, patients' dining rooms and the usual household duties connected with the

wards. We have a school which I think was begun during Dr. Mabon's term of office. This school is conducted along the lines described by Dr. Haviland. We have been careful to select certain patients, particularly young women between the age of fifteen and twenty-five suffering from dementia præcox, whose dementia was so profound as to render it impossible to start them successfully at any kind of useful occupation, and who will do little or nothing for themselves in any way, being careless and indifferent about their dress and person. We have endeavored to excite healthy reactions in them by resorting to different things calculated to arouse their interest and attention, such as ball playing, marching to music, dancing and calisthenics, but I regret to say that the results of our efforts with this particular class have not been encouraging, and there seems to be a large number of them who make no progress toward any permanent improvement. We have, too, fancy sewing classes which afford employment for another type of patients who take pleasure in doing that kind of work, and doubtless receive much benefit from doing it. We have not as yet gone into the pierced brass work or fancy basket-making which was referred to in the paper. This subject has been admirably presented by Dr. Haviland, and I have no doubt that when the paper comes to be printed and read by the medical officers of the various hospitals it will do a great deal of good.

Dr. ASHLEY: There is very little that is new in the way of occupation that has been attempted at Middletown during the past few years. We are endeavoring, in a quiet way, to find occupation for practically all of our patients that we can induce to assist in any way with the hospital work. We have basket classes and sewing classes, which were established two or three years ago. In addition to this there is a great deal of other work that is done during the year and is kept for an annual exhibition known as the "Patients' Fair;" this fair is held two days and nights in the Amusement Hall. Notices are sent to the local press. The patients take part not only in making the articles and preparing the exhibits, but in the sale of the articles from

the booths. The proceeds from the fair are used for special purposes, such as buying additional articles for the patients to use for another fair, and also to buy many little things for the patients which we do not feel it is proper to include in our estimates. Quite a number of the patients require certain delicacies, or articles of clothing or adornment that we can buy from the proceeds and profits of the fair.

That occupation of the insane has a therapeutic value I think admits of no argument. I would like briefly to call attention to one case as an illustration of the curative value of occupation. We had a patient, a physician, at the hospital who had been the rounds of some three private institutions where he had spent three or four years without making any progress whatever toward recovery, and was exceedingly depressed. The patient could not be induced at first to take a single step without some one physically urging him. That was attempted and after a while he got so that he would follow his nurse, so he was taken out in the fields and followed the nurse back to the building. He was a specialist in physical diagnosis, and was induced to examine the thoracic organs of one or two of the patients on the ward, which appeared to arouse him a bit from the depression. Then he was induced to make a physical examination of all of the other patients in the ward. He then was asked to make an examination of the lungs of practically all of the male patients. He recovered and was employed as a clinical assistant. After serving in that capacity he resigned and is now in New York and has a splendid practice.

Another case who had been in bed several years when I took charge of the hospital could not be induced to get out of bed; he was taken in a hand cart some distance from his ward and left to return by walking, which he did, and took regular exercise thereafter. That man continually improved to such an extent that he not only became very industrious, but eloped from the hospital.

The CHAIRMAN: At the New York State Conference of Charities and Corrections in Rochester in 1910, there was a notable exhibition, not the least of which was from St.

Lawrence. We would like to hear from Dr. Ross something about the work there.

Dr. Ross: It is rather unfortunate that the illness of Dr. Hutchings makes it necessary for me to represent him. He wished me to call attention at the conference to the class at the St. Lawrence State Hospital which has been in operation for the past three years. The class of cases selected are those we generally see sitting about the wards idle, indifferent, sometimes untidy, sometimes disturbed. They are taken to this class, which numbers approximately 24 or 25, and in which we have four attendants who instruct them. They begin with the simplest exercises; sometimes their hands are so stiff they are unable to hold any thing and we give them exercises to limber their fingers, and one case in particular, the lady in charge of the class states, it took three months to get her hands in such condition that she could hold a needle. They graduate from this to simpler work, it sometimes being necessary to hold their hands and make them go through the motions, eventually getting them in such shape so that they do the thing themselves. The results of the class I think have been rather startling. We have had seventy go through this class in the last three years. (These cases I might say are those which generally are supposed to be patients who will stay in the hospital practically their whole lives.) The first year there were four improved to such an extent that relatives took them home. The second year twelve went from the class, and this past year eight have been sent home; besides these there have been a number of the cases improved to such an extent that they can take their places in the general work of the hospital at sewing, and the like. There were two cases in particular which, to my mind, showed what good work had been done. One case of dementia præcox was mute, drooling saliva to such an extent it was necessary to have a rubber bib to keep her from getting wet. This case a few days ago was assisting another patient not quite so bright in making a basket. Another case, transferred from one of the down-State hospitals, has been in the institution seventeen years, and when she came to the class her hands

were so stiff she could do nothing. To-day she is sewing and doing very good work.

We feel much can be done with this class of patients if the proper attention is given. In the past year or so we have had a very efficient person in charge of the work, the wife of one of our physicians. She is especially interested and I think a good deal of what is accomplished depends on the interest the person in charge of the work takes.

The CHAIRMAN: Dr. Hoch, have you anything to add from your wide experience?

Dr. HOCH: What struck me particularly about Dr. Haviland's excellent paper, which presented the whole matter in a very comprehensive way, was, on the one hand, the cases which he reported at the end and which illustrate certain results, but which above all illustrate the fact that it is necessary to spend quite a little time with these people. That the older way of offering occupations to those who will readily take it has gradually become replaced by an occupation which is a real treatment, in which real investigation is absolutely necessary, where the patient is given the sort of thing to do that he is most interested in, and the occupation is shifted as necessary until finally the interest can be aroused. The same thing comes I think from all of the discussion. Dr. Ashley's case and some of the other cases which I heard spoken of at Middletown and also in the case of St. Lawrence, confirm this.

Miss NEWBOLD: All our patients are very much interested in the various occupations, not only the more quiet ones, but especially the more disturbed ones. I wish you could visit our farm cottages and inspect the closets of preserves and vegetables which are put up annually. The women patients pick all the fruit themselves, thus giving them outdoor employment during the summer. Men, of course, are easily employed in the grounds, but it is hard to find outdoor employment for women, and small gardens which they could cultivate themselves might be of benefit. In our hospital we have all these industrial, as well as more artistic occupations, more or less well done. I have always found the patients keenly inter-

ested, especially in any new work. I do not believe in either doctors or nurses being teachers. I think the influence of teachers from outside is far greater than that of persons living in the hospital and in daily contact with the patients. If the younger physicians will undertake to oversee these classes and see that they are efficiently taught their interest would add much to the success of such work. If the patients go to these classes as to a school in another hall, this novelty would add greatly to their interest and help the influence of the teacher. In view of the constantly increasing number of illiterate patients who can neither read or write English, it would be useful to have classes in those two subjects, especially for the men, who might find it easier to find work when they leave the institution.

Miss CLARK: I should be very glad to say a word on this subject, for I feel very strongly the importance of experts in the supervision of this work. It seems to me that while the co-operation of the attendants is very desirable, and I was impressed by the point Dr. Haviland made in speaking of that, there ought to be more trained direction of the patients' work; that is, it ought to be in charge of people who not only understand the technique of the arts and crafts, but who also have good taste and some knowledge of the theory of design. The amount of time, energy and ingenuity that goes, in many cases, to the manufacture of articles that are poor in design and color is most deplorable, when really beautiful things might just as well be the result of that same expenditure of time and skill. In fact, beautiful things are generally more easily made than ugly ones, because they are ordinarily simpler in design and execution. I wonder whether there is not some advantage in improving the taste of the patients, especially if they are to pursue arts learned in the hospital after their discharge, and I wonder whether there is not a great advantage in improving the market value of their products even while they remain in the hospital. Can we expect for a very long time to dispose of these articles by selling a great many of them to friends of patients and officers and employees of hospitals? Should we not look forward to finding a market outside the hospitals for

some of these products? A while ago I was approached by a representative of a committee of women who have in charge an enterprise called "The Label Shop," which sells the products of women's work made under suitable conditions. A space in the shop is given up to selling various articles of handicraft which are largely the result, I believe, of the industrial work carried on in connection with the various social settlements, beautiful weaving, rugs, baskets, pottery, stenciled and embroidered articles of various sorts, most of them the handiwork of immigrant women of much the same class as our hospital patients. I was approached by the committee in charge of this shop with a view to seeing whether the State institutions would care to co-operate and send articles for sale. I took on a visit to one of the institutions, a woman interested in this shop, who is a teacher of arts and crafts, and she was very much impressed by both the ability and the skill shown by the patients of the hospital we visited, and by the very poor taste shown in the selection of designs and colors, and the consequently small market value of the articles produced. If you visit the exhibition of arts and crafts now on view at the National Arts Club, you see very simple things selling for very large prices. With the right training and direction our State hospital patients could produce many similar articles of beauty, utility and value. Even children can be taught to do such work and to grasp many of the principles of design, as is evident from the exhibitions of the handiwork of pupils in public and private schools. I think we should have over the patients and attendants people who understand both the theory and the practice of the arts and crafts, and who are capable of imparting their knowledge in a way that is attractive and stimulating to those instructed, so that both the therapeutic value of the work and the market value of the products may be increased.

One other suggestion that has occurred to me in this connection is that of extending the benefits of the occupation of patients to the greatest possible number. Could not beneficial results be secured by getting many more patients who are unable at first to co-operate to derive some benefit from looking on at the occupations and amusements of others? The

most entertaining thing in the world is to work, and the next most entertaining thing is to see other people work. It is also very entertaining to see people amuse themselves by dancing, calisthenics, games and sports. When there is a dance or a calisthenics class or a class in anything else, should not the walls be lined by patients who could get much benefit by looking on and having their minds diverted? I am always impressed by the fact that while these various forms of occupation and entertainment are so very valuable, and are being so greatly increased in number and variety, they still do not reach a very large proportion of the patients. I wish they might reach, in some way or another, practically every patient capable of being benefited. Of course at present the facilities are very inadequate, and to do this work properly would mean the appointment at every hospital, especially the large ones, of a corps of teachers. But even with the few facilities at present provided something can be done if all the ingenuity possible is used to extend to the greatest number of patients the benefits of participation either as actors or as spectators in practically every form of interesting occupation or entertainment.

Dr. MACY: Of course all that Dr. Haviland has said embodies largely what I have been working for for a good many years and I will not refer to that except to say the doctor and myself are in complete accord on all these matters.

I would like to say just a word on one or two things Miss Clark referred to. The very idea that actually exists in the pushing of this work, Dr. Haviland referred to in his paper is to reach the largest possible number of patients in the institution. That was mentioned specifically in what the doctor said in regard to the outside work. It may take longer than Dr. Haviland referred to to accomplish all we want to do, and probably will, but we will proceed in that direction and I hope we will have some very good returns. We appreciate very thoroughly the need of more skilled supervision in connection with many of these things. On the other hand, we have always, for many years, been met with the matter of the lack of means, and it has there-

fore, so far as my entire experience in this work goes, always been our effort to try and evolve whatever is done from within ourselves and with our own means, and to encroach as little as possible upon the budget by asking for skilled instructors. Little by little the attitude of the State at large has changed in some of these matters and allowances have been larger, and as they have become larger, we have been able to get better results. We have a more contented population by far than ever was found in the old days. There are fewer chronic disturbed patients giving the extreme amount of trouble, but there is a great deal to be done still and I think that must be done slowly and be a matter of evolution in our work, as it has been in the past. There are probably none of us in a way satisfied with the amount of help we have to handle the work in our hands. Compared with full hospital treatment for the acute sick, many of our divisions are undermanned in having possibly only fifty per cent of the number of paid employees that would be necessary to bring these particular divisions up to the highest efficiency, and to do the most for the individual patients. The best results we have obtained have been in individualizing the treatment, and, with a larger percentage of employees that would be possible on a greater scale. The difficulty in a population such as ours is that so little can be done for the lower grades of employees in the way of wages, quarters, dining rooms, food supplies, etc., and this brings an additional difficulty in getting the best special grade of help for that work. Still, at the same time, it is our idea that as what we do progresses, and as it makes a sufficient showing to prove its worth, and even necessity, we expect to bring such matters to the Commission and to allow the full work to grow by evolution. It is very difficult to say in advance just how much you can do when you are dealing with the delusional cases and those that react so slowly, and we certainly will welcome any assistance from the outside in the direction of improvement of the work in securing higher standard of output, which assistance I think would be very beneficial.

Dr. SMITH: At Central Islip, in every branch of in-

dustry patient labor is represented, with the exception of the medical staff, and if vacancies continue to occur there I shall have to try to train patients for that. The chronic patients are the housekeepers for the acute and infirm, but the only trouble and real problem with which we have to deal is to find suitable and agreeable indoor and out of door work for our women patients.

We are not so far advanced in the arts as Ward's Island and Kings Park, though we have a large number employed in general housework, sewing room, dining room, etc., and in the summer months we have them in the gardens, picking fruits and berries and watering and weeding flower beds.

With reference to what has been said about the co-operation of the attendants, I believe the great need is for better and more permanent help, and this can be brought about only by paying higher wages.

It is not a question of what we do as to the number of patients that are employed in doing it. We look upon a sand heap at Central Islip, if it is to be removed, as a drug store, metaphorically speaking, and we consider the shovel and hoe as more important than the drug store.

Commissioner SANGER: Since I have been upon the Commission, few subjects have seemed to me more important than the scientific education of the insane. There is a great difference between finding out what a patient is willing to do, and stopping there, and educating the same patient up to something higher and better than he is able to do if left to himself. In some hospitals, as you know, notably at Rochester, patients of the lowest mental condition, patients who could not get out of a chair alone, or patients who could not be persuaded to go out of the house unless they were led, have by patient and scientific treatment been so improved that they could take good care of themselves, do a certain amount of work, and dance or play games. The therapeutic benefits of such treatment may properly be the subject of careful study and consideration on the part of the superintendents and of the Commission.

I agree with what has been said about the importance of

having trained people to do this work. We know that to do any important work successfully, a person must have natural capacity, and in addition to this, there must be an intelligent, scientific training and equipment in order to get the best results.

The Commissioners feel certain that the superintendents will give this question most careful consideration. I believe that there are in the service a number of medical men particularly fitted for this work, and it is of great importance that the scope of the work should be extended. It will help the patients; it is humanitarian. In addition, it is going to lessen the work of caring for the sick because it will make these helpless and depressed patients amenable to the ordinary discipline of the hospital and in that way lighten the work of the doctors and attendants.

Dr. WOLCOTT: One of the greatest blessings in this world for sane people is congenial work. A man's happiness and even his usefulness, if his work is adapted to his particular ability, is dependent upon employment with the minimum amount of irritation and discontent.

The same principle holds good regarding the insane. Occupations should be provided for all insane patients whose mental and physical condition will permit, if the best results upon the patients are to be secured. It is not sufficient that they should be employed merely, but the occupation should be a congenial one if possible.

The discovery of the particular employment suitable to the inclination and taste of each patient is an important step in his or her recovery. Of course the State from the practical viewpoint with over 30,000 insane under treatment could not meet the requirements of each individual patient in this respect, for this would be an impossibility even with a similar number of well people; but if special attention should be given to classification and segregation of patients having this idea in mind, much could be accomplished and many more patients would be lead out of darkness into the light of reason and normal mentality.

It is needless at this time to consider what is already being done in this respect for this feature of the work has

been emphasized and is well known to all present. But it seems to me if we would particularize more, make finer classification of our patients in this respect, and consider of secondary importance the value of this or that patient's ability, to reimburse the State for his or her care and maintenance, we would materially improve our percentage of recoveries. This is of greater importance, and more consistent with the idea of the State hospital system which primarily is to cure and not necessarily to employ these patients.

Much has been made of games and various amusements for the insane. Upon this subject there is doubtless unanimity of opinion. On the other hand, however, when they are carried to excess there is just cause for criticism. Excessive amusement for well people is fatiguing, tends to depress the nervous system and disturb the mental condition. It is reasonable to suppose that under similar circumstances similar effects would be produced upon the insane. Wholesome amusements even of various kinds are right and proper, but they can not take the place of congenial work when indicated, as a means of mental and physical restoration.

Dr. PILGRIM: In the Hudson River State Hospital from 60 to 70 per cent of the patients are engaged in some useful occupation, such as:

Ward and dining room work.

Laundry work.

Dress making and tailor shops.

Upholstering, mattress making, brush, broom and shoe shops.

Farms, barns, lawns, roads, and greenhouses.

Housework in officers' and employees' quarters.

In the various mechanical departments, such as assistants to the carpenter, mason, engineer, electrician, painter and baker.

Also in the butcher shop, store room, offices and kitchen.

And the numerous miscellaneous duties around hospital such as picking up débris and refuse, running of errands and general utility work.

The greater part of the routine work is done by the chronic patients and the general result is better mental poise, greater contentment and increased physical health.

The value of outside work upon the physical condition is shown by the fact that only two of those who died of tuberculosis during the past year, were or had been, outside workers.

Extremely deteriorated patients sometimes make excellent workers. Work is a habit and experience shows that demented patients can be trained to form of habits of work instead of habits less desirable. Few patients are so deteriorated that they can not be taught to do some form of work if efforts are persistently kept up by attendants. Here, however, the difficulty lies, for often the attendants from selfish motives fail to use their influence to induce patients to engage in congenial occupation away from the wards.

The rewards to the workers are tobacco and extra food for the men, and extra food and perhaps better clothing for the women. Both are given every opportunity for amusement. Among the acute cases we introduced years ago, under a competent teacher, occupation classes consisting of groups of from four to eight patients who are engaged in the weaving of rugs and bureau scarfs, the making of fancy baskets, raffia work, drawn work, etc. The results have been of decided advantage to the depressed cases, many of whom have become happier and brighter as a result of such occupation, and many too have relapsed into a depressed state when the occupation has for any reason been discontinued. Agitated patients have also been helped and have become less agitated. Regular occupation is not suitable for extremely excited and maniacal cases; efforts to interest them must be left until extreme excitement has subsided.

The first great difficulty is to find suitable pursuits and the second is to find suitable persons to carry out your desires. Pottery decoration and clay moulding are favorably spoken of, as is also brass work, but we have as yet not been able to introduce them, as they are occupations

better suited to those in private institutions. No one who has had experience can doubt the beneficial effects of occupation and the effort to make it remunerative to the State should not be considered of prime importance.

The CHAIRMAN: The extent and value of the work of the Board of Alienists has been known to us all for many years. I do not think they have ever received the recognition they deserve; certainly they did not after the loss of Dr. Wilgus, who accepted a position in Illinois, when for many months the entire burden was carried by Dr. Campbell and Dr. Sylvester, both having relinquished their vacations. You probably know that during the last fiscal year over 1,100 alien patients were deported to other countries and States by our Board. They tell us that even more of our aliens can be deported with a little closer co-operation by the superintendents. I would like to have one of their number tell us exactly in what direction we can be of more value in assisting the Alienists.

Dr. SALMON: Everybody will agree that the present immigration laws do not afford this State sufficient protection against the immigration of the insane and mentally defective, but I hardly see how any State can request to have these laws made more stringent when full advantage is not taken of them. We should regard the enforcement of the immigration laws regarding the insane as a matter between the federal government and the State government and therefore it should be done under some uniform regulations. It is not a matter between the federal government and the hospitals. I think that we have an analogous condition in the relations of foreign government with our own.

In the different hospitals there are very different practices regarding reporting insane aliens, and in administering the law the State will lose much of its influence with the federal government and will find it more difficult to deport if this function is not under uniform regulations.

One of the matters in which it seems better co-operation might be obtained is the matter of discharging patients against whom a warrant of deportation has been issued. The warrant is issued by the Department of Commerce and

Labor upon the representations of New York State. I take it that in our part in the proceedings the State Board of Alienists is representing the State Commission in Lunacy, not the individual hospital. The warrant of deportation is issued because sufficient cause has been shown that the alien should be deported. It happens sometimes that after this the alien is discharged from the hospital. In one case which occurred recently, the alien was discharged from the hospital because the friends had raised \$120 to return him to his home in Turkey. He would have been deported at about the same time if the matter had been left in the hands of the federal government. What happened in this case was that the steamship company, instead of having to take him back at its own expense, made \$120. The alien himself did not fare very well because no transportation company was bound to accept him. Even if he succeeded in getting aboard the vessel at New York, when he reached the other side, if his condition caused comment, any transportation company could have refused to carry him any further and he would have been left stranded at the port of entry. If, however, he had been deported by the federal government, it would have been absolutely mandatory upon all transportation companies to accept him. The State receives payment from the federal government for the maintenance of deportable aliens, but it is not generally known that this maintenance is not paid unless the patient is deported. If an alien is discharged, or a warrant cancelled, nothing is paid to the State. The alien must subsequently be deported, and so in this case the State lost five dollars a week through the discharge of the patient. So in this case, and there are a great many others very similar to it, the interest of the State were not well served, the interests of the patient were not well served, and I think the interests of the country were not well served, because the number of cases returned is an index of the efficiency with which the immigration laws are enforced. Ellis Island is quite sensitive in this matter. If four hundred aliens are returned as insane within the first year, it shows that some received admission who might possibly have been detained with more

careful examination. Therefore, we believe that in nearly all such cases the immigration law should take its course.

It is not generally known that the present law gives the Secretary of Commerce and Labor wide discretion. Last year 360 cases were deported from New York State hospitals, and 36 certificates were cancelled. A discretion which enables the secretary to refuse deportation in ten per cent of all cases is very freely exercised, so I do not think that anybody need feel that in any special case the secretary is clothed with authority that is not exercised, for we have evidence to show that he uses that authority very freely.

Another matter which causes us some embarrassment is the fact that often the assistant physicians in hospitals, not appreciating, I think, the importance of maintaining a strict inspection over immigrants and enforcing the laws permitting the deportation of insane aliens, give statements to the relatives and friends of patients which often form the ground later for proceedings to set aside warrants of deportation. It seems that this is a matter in which the importance of the relation between the State and federal governments requires that unauthorized persons should not interfere. The superintendents of the hospitals sign all communications to the friends of patients and a verbal communication from a subordinate medical officer is rather improper under such conditions.

More persons are sent to Europe at the expense of the State every year than are deported by the federal immigration service. That forms an outlet for our patients which everybody appreciates and of which all of the superintendents take advantage, but the difficulties and the anxiety involved fall mostly on the Board of Alienists. When things seem to go wrong we are subjected to criticism. Now one of the simplest safeguards for patients traveling 5,000 miles by land and sea is that they should have sufficient funds to defray incidental expenses. Patients sometimes come to us in New York to cross the ocean and half the continent of Europe with no money at all. In such cases we advance the money from our deportation fund.

That fund is so slender that we are unable to send many cases the relatives would like to return, and we believe that the money might more properly come from the maintenance funds of the hospitals. If the patients were going to return to their own homes in this State, the Insanity Law permits the superintendent to give them money, and if a patient who has only lately recovered is going to cross the continent of Europe, it seems to me that he should have an equal amount and that it should not be taken from our deportation fund. The present deportation fund will be exhausted by the first of February and the rest of the year the importunities of friends to return their relatives will have to be disregarded unless more money is forthcoming.

Another matter which causes us much difficulty is getting patients accepted by the steamship companies. The steamship companies maintain no inspection worthy of the name on the other side, but it is not generally known that at our ports a very severe inspection takes place. The reason is that other governments would not like to have inferior people returned to them although they are very willing to have them come here. We have opportunity every day to see the practical operation of this system, and with patients returned at the expense of the State, appearance counts for a great deal. If a patient is recovered, orderly, and perfectly able to go in safety, he will not be accepted at the gangway if he has on clothing which looks like institution clothing, one of the straw hats for outdoor wear the patients have in the summer time, for instance. Therefore I think it is important that the patients be dressed so that they will pass muster, as they go aboard among the stream of immigrants. The officers of the hospital do not bear the trouble on such occasions but Dr. Campbell and I have been ejected from the dock for trying to send people to Europe, from which apparently any may come but to which only selected people may return.

Another matter which causes us some concern is the general feeling that we are engaged in a pretty cruel sort of business. It is a great hardship to be deported, not only

for the immigrant, but for his friends, we admit, but it is also a great hardship for the country to have to support aliens who came here insane or with causes which resulted in insanity. At the present time there are 8,000 aliens in our State hospitals being maintained at public expense. We have heard to-day that certain desirable conditions can not be brought about because of overcrowding, but if insane aliens had not come here in such numbers, there would be no overcrowding. It is hardly fair to lay all the hardships of deportation at the door of the Board of Alienists, who are only enforcing immigration laws passed largely at the request of this State. Many here will recall that the law increasing the deportation period from two to three years was passed at the request of the State Commission in Lunacy. So, although we do not like to be criticized for causing immigrants hardships, we do not feel we ought to be deterred from doing our duty. We are performing a function too important to be much influenced by criticism.

A great many things about the immigration law are in doubt, and as some of those matters come closely under our observation, we would be very glad to answer some of the objections which have been raised in the past.

From time to time certain criticisms have been made of the methods of deportation and I think that if this could be brought up, a little further discussion would tend to remove some of the ideas that prevail. For instance, it is not generally known that the entire expense of deportation is borne by the steamship companies and the federal government, and that the State does not share in it. Notwithstanding this fact the suggestion was made some time ago that, in the case of the western hospitals, we deal with the immigration commissioner at Niagara Falls to save expense. Of course we have no authority whatever to deal with any one excepting Commissioner Williams of Ellis Island. I think the point was made that the State would save expense in that case as the man would be turned over to the commissioner of Niagara Falls instead of being brought to New York. Of course all have to be brought to New York for

embarkation and the expense is borne by the steamship companies and the federal government.

The CHAIRMAN: The State Medical Society's annual meeting will take place in Albany, April 16, 17 and 18, 1912. The officers desire a report of the medical work of the State hospitals to be made at that time and they have requested that such a presentation be made by a superintendent chosen by vote of all the superintendents at this conference. This is very desirable, as it will bring in closer communication the members of this conference engaged in the specialty of psychiatry, with the profession at large. We are generally misunderstood, for they have not entirely grasped the magnitude, aims and methods of our service, and this seems a very desirable chance of putting before the whole State medical organization a presentation of the facts concerning our work.

Dr. MACY: I will nominate Dr. Pilgrim.

No other nominations were made.

Dr. PILGRIM: While I appreciate this honor very much, it seems to me that one thoroughly acquainted with the work being done at the Manhattan State Hospital, the Psychiatric Institute, etc., could prepare a better report than I could.

The CHAIRMAN: A paper for the State society meeting has been requested from the Director of the Psychiatric Institute, who has associated with himself Dr. Kirby, and probably that department of our work will be covered. It is requested that you write a paper to consume not more than twenty minutes in delivery, but which may be more extended for printing, covering the scientific work in the State hospitals for the insane, so as to inform the profession at large what work is being done of a medical character in our department.

The conference unanimously elected Dr. Pilgrim for this work.

The chairmen of the committees on care of the insane pending commitment, on the training school and on blanks, forms and statistics, stated that no formal report had been prepared for the conference. The report of the committee on salaries and wages had already been included in the report

made by the committee to suggest amendments to the Insanity Law, and the chairman stated that there was nothing further to report at the present time.

Dr. ELLIOTT: About a week after Dr. Doran's death I was requested by Dr. Mosher, the editor of the *Albany Medical Annals*, to prepare an obituary for publication in that journal, and did so. Some time after this I received notice from the Commission of my appointment as chairman of a committee to prepare such a sketch for this conference, and after consultation this morning with Dr. Macy, who is a member of this committee, it was suggested that this obituary, which appeared in the November issue of the *Albany Medical Annals*, be presented here.

Dr. WAGNER: I move that the notice be read and spread upon the minutes of this conference.

Which motion was duly seconded and carried.

(The obituary notice of Dr. Doran appeared in the February number of the BULLETIN).

Commissioner BISSELL: I move that when this conference adjourns, we come back after luncheon for a further conference in executive session. While I appreciate the papers and the discussion of them, I have in mind that it is desirable to do what we did at Binghamton at the last conference, that is, let us have a good heart to heart talk between the members of the boards of managers, the superintendents and the Commission. It may be that some of you are dissatisfied with what the Commission is doing, and that you would like to speak out plainly and tell us, and we invite that kind of criticism. We want to get together to hear complaints and to do what we can to improve the service. We can do it with a heart to heart talk, do it with the understanding that our speeches are not required to be eloquent and will not be published. We should talk matters over fully in executive session.

Which motion was duly seconded and carried.

The CHAIRMAN: This conference will now adjourn to meet this afternoon at 2.30.

AFTERNOON SESSION.

Commissioner BISSELL in the chair.

The CHAIRMAN: In the absence of Dr. Ferris, who was obliged to go back to the city, I will take the position of chairman of this meeting, and I wish to say first that Colonel Sanger and I, in discussing the work of the conference, held as required by the statute, that is, a quarterly conference of the superintendents and managers with the Commission, decided that it would be well to take a part of the time at each conference for an executive session. The papers that are read are very valuable and interesting and the discussions which follow are also of value, but we are anxious to get very close to the managers and superintendents by having a heart to heart talk in executive session, with the understanding that what is said in that session is not to be printed, so that everybody will have an opportunity, if he has anything in his mind, to express himself freely about it, and secure a general discussion which will be ultimately for the benefit of the service. And it is for that reason that we have asked you to come back after luncheon to hold this executive session where we can all talk plainly together, and this includes any criticisms that you may desire to make of the Commission and its work. This Commission is not sensitive to proper criticism, to informing you as to anything you think you ought to know about, and hearing anything you can suggest to enable us to improve our work. You can make your suggestions, and we will return our suggestions—and take up anything that is for the benefit of the service. We do not desire unkind criticism, but friendly criticism, which will enable us to get the best results. Having said so much, I will call upon any one here who has anything in mind to present it.

On motion duly seconded, the conference went into executive session.

During the executive session, formal action was taken on the following matters.

The difficulty of returning residents of the State of New Jersey, who have found domicile in the New York State

hospitals, to that State. The Commission announced that it would endeavor to adjust this matter with the proper authorities of the State of New Jersey.

It was, on motion, duly seconded,

VOTED, That the Chair appoint a publicity committee to investigate the matter of proper publicity for the work of the State hospitals and the Lunacy Department and report at the next conference.

As such committee the chair appointed Mr. Harry N. Gardner, Chairman, Miss Mary E. Richmond, Mr. Robert Hibbard, Dr. H. L. Palmer and Mr. E. S. Elwood.

It was, on motion, duly seconded,

VOTED, That the Commission be requested to have at each conference hereafter, at least one executive session.

On motion, the conference adjourned.

LEWIS M. FARRINGTON,

Secretary of Conference.

REPORT OF THE INTER-HOSPITAL CONFERENCE
OF PHYSICIANS HELD AT THE HUDSON
RIVER STATE HOSPITAL, JUNE
14 AND 15, 1911.

Dr. Charles W. Pilgrim, Superintendent, presided at the meetings.

The following is a list of those who were present:

Drs. HOCH, DUNLAP, LAMBERT and HENDERSON of the Psychiatric Institute.
Dr. FISH and Dr. KELLEY of Middletown State Homeopathic Hospital.
Dr. SPELLMAN, Dr. HAVILAND, Dr. WASHBURN, Dr. PHILLIPS of Manhattan State Hospital.
Dr. BROWN, Dr. DODGE, Dr. ROSS, Dr. WISEMAN of Kings Park State Hospital.
Dr. JOSEPH SMITH of Long Island State Hospital.
Dr. HEYMAN, Dr. MOORE of Central Islip State Hospital.
Dr. SPENCER of Dannemora State Hospital.
Dr. PARSONS, Dr. MERRIMAN, Dr. RAYNOR, Dr. MELLEN, Dr. CAVANAUGH, Dr. MATTHEWS, Dr. PORTER, Dr. HELMER, Dr. CARPENTER, Dr. CURTIS and Dr. KING of the Hudson River State Hospital.

Dr. MATTHEWS read a paper entitled "**A Study of the Clinical Manifestations of Cerebral Syphilis**," which is published in full in another portion of the present issue of the BULLETIN.

Discussion of Dr. Matthews' paper:

Dr. HENDERSON: I think the question of differentiating between cerebral syphilis and general paresis is interesting and of practical importance. I have lately been going over a great many cases in connection with a study of cerebral syphilis, both with autopsy and without, and have had considerable difficulty in estimating the value of the different mental and physical signs. Regarding the mental condition, we have in both types many similarities. It has been thought for a long time that grandiose ideas would rather exclude cerebral syphilis, but this is evidently not correct. The onset of the mental symptoms in my cases was generally very acute, and I was surprised to hear Dr. Matthews state that it was in his cases frequently prolonged. Often headache, dizzy spells, loss of memory, defective pupillary reaction, etc., were seen. Memory defect is usually very striking. A striking difference in the mental picture

of the two conditions is that often in cerebral syphilis the personality of the individual seems to be much better preserved, the patient appreciating his condition and acting more like a patient in a general hospital. One of the important physical signs is the presence or absence of Argyll-Robertson pupils. Siemerling, in an analysis of 1,639 cases, found only one per cent due to cerebral syphilis. Dr. Michell Clarke, in a series of 69 cases of cerebro-spinal syphilis, found five cases with Argyll-Robertson pupils. At the Institute we have two or three cases at the present time.

In regard to the treatment, we have had pretty satisfactory results. More than half of the cases recovered and some were pretty well improved. In one or two cases where they did not react to 606 they reacted to mercury, and in one case which we treated with mercury for years, the patient showing no improvement, he reacted considerably to 606.

Dr. HOCH: I agree with the points outlined by Dr. Henderson. Particularly important, in the differentiation between cerebral syphilis and general paralysis, seems to be the fact that in the former there is usually a better preservation of the personality (not only a better insight!), that the course is less progressive, that Argyll-Robertson pupil is much less common, and that *typical* speech defect is usually absent. The onset is more likely to be acute with confusion, and focal symptoms are perhaps more likely to occur. It will be important to work out the differences which exist in cerebral syphilis of the more acute character with marked meningitis, and the later forms with slight meningitis and endarteritis. This will probably account for the difference in the onset which Dr. Matthews and Dr. Henderson found.

Dr. H. P. CARPENTER presented "**A Review of Cases which had come to Autopsy.**" Among these the following may be briefly sketched:

I. TWO CASES OF TUMOR OF THE RIGHT TEMPORAL LOBE.

CASE I. D. T. Case No. 15073. A man of 48, was found acting in an irrational manner on the streets of Tarrytown, and was sent to Hudson River State Hospital. No information could be obtained about his history. At the hospital he spoke repeatedly of having a cancer in his head, complained considerably of persistent headache and vomited on several occasions. He also spoke of having a "difficulty" or "thickness" in his mind and complained of *bad smells*. He could not always find the right word in talking and would also say peculiar things without any connection, as "understanding life and death". There was a striking defect in retention. He was somewhat dull at first and presented sluggishly reacting pupils, equally exaggerated reflexes, and considerable facial tremor.

Six weeks after admission he began to fail rapidly, was more tremulous and showed some *spasticity and ataxia especially on the*

left side. There was ptosis of the right eyelid and the eye-muscles supplied by the third nerve were partially paralyzed. The right pupil was dilated and inactive. Both optic discs presented blurring and swollen edges. Stupor became pronounced, he rarely finished answers begun, and died two months after admission.

A lobular glioma about the size of an English walnut was found in the substance of the right temporal lobe. The third nerve was pressed upon and the pons flattened.

The quite characteristic brain tumor symptoms encountered at first did not clearly allow to localize the tumor although the "bad smells" should have attracted the attention to the temporal lobe. The ptosis and dilatation of the pupil on one side, together with spasticity and ataxia especially on the other side, also should have pointed in the same direction.

The fact that the patient spoke of cancer in the head might have indicated that there was a localized discomfort had it been investigated. His inability to find the right word, at times, ought to have suggested a more thorough examination into an aphasic disorder, in spite of the fact that the tumor was on the right side.

CASE II. J. C. Case No. 14764. A man of about 30, was found on the streets of Dobbs Ferry, and was sent to White Plains jail. From there he was soon returned to Dobbs Ferry for commitment.

He was admitted to the Hudson River State Hospital in a dazed, confused condition, with complete disorientation, very poor memory and gross discrepancies in his statements.

The physical examination showed that he had diminished knee-jerks, diminished pain sense, marked Romberg swaying, tremulous hands, tongue and eyelids. The pupils reacted to direct light but not consensually. These symptoms led to a diagnosis of general paresis and two lumbar punctures were made, a brownish red fluid was withdrawn but there was no increase in cells. General epileptiform convulsions supervened and death occurred three months after admission. At no time had there been headache or vomiting. The sight was not impaired; the eye grounds were not examined.

A large very cellular glioma was found in the right temporal lobe.

In this case the glioma was larger than in the previous case, and the mental disturbance more profound, yet there was no vomiting and headache.

While there were symptoms suggestive of general paralysis, the marked acute confusion, the persistence of the pupillary reaction, and the negative results of two lumbar punctures should have caused one to exhaust all other possibilities. The brownish color of the spinal fluid was also of interest.

II. GENERAL PARALYSIS WITH APHASIC SYMPTOMS.

CASE I. Wm. P. Age 60. The patient is said to have had an epileptic convulsion, following which he showed aphasic symptoms which

may be summarized as follows: The patient presented paraphasia; he was unable to repeat, unable to execute simple written commands or simple spoken commands, or to pick out objects named, though he knew their use; writing was lost, he could not even write his name, but he could copy letters, simple figures, simple words and geometrical figures; he could read letters fairly well and figures less so, but he was unable to read sentences.

At the autopsy the patient presented, besides characteristics of general paralysis, more pronounced atrophy in the convolutions of the parieto-occipital convexity, with a low grade of girdling endarteritis in this area. A greater poverty of nerve cells seemed to be present in the left parieto-temporo-occipital region than in the frontal region where the general paralytic process was most intense. There was no gross defect anywhere.

CASE II. M. R. Case No. 15549. A case of general paresis moderately well advanced complicated by a speech defect of sudden onset, of two years duration. *Spontaneous speech* was limited to recurrent utterances with difficulty in articulation. *Repeating* was not much better. She could repeat with difficulty only a few simple words and letters and often said these wrong, as Wednesday was called "Wednay" and October "Ocar". In *striking contrast to this was the fact that she could read aloud printed sentences relatively well*, even filling out abbreviations correctly as in the following, read from a magazine: "Thoroughly reliable—Baker's cocoa—a delicious drink, a perfect food—Highest awards 5—2 highest awards—Walter Baker & Co. Ltd. Established 1870, Dorchester, Mass." She seemed to have some understanding of what she read. Under more difficult situations such as the printing on a one dollar bill she read with paraphasia, saying "one derler—silver cert—if—cat.—u—nited—states—of muriker." She could read writing less well. She could not *name objects* seen or heard, and usually made no attempt or brought forth recurrent utterances as "pay—de—cold." She could *pick out objects* fairly well and carry out commands, if not too complicated. Written commands were not tested. Writing was quite abolished and copying interfered with. Serial speech was entirely gone. Spelling and composing spelled words abolished, though it was not ascertained if she understood spelled words. Physically there were some right-sided signs: weakness of the right face and a little weakness of the right hand. The knee-jerks were exaggerated but equal. Ankle clonus was more marked on the left side.

Six weeks after admission the patient fell over the foot of the bed, struck her chin and sustained a fracture of the base of the skull. She died four days later. The brain presented evidence of hemorrhagic pachymeningitis, especially over the left hemisphere. The latter was shorter and narrower than the right. The hemispheres presented characteristic gross and microscopic changes of general paralysis. There was also collapse and occlusion of the posterior end of the basilar artery and of both vertebrals for a short distance.

We have, therefore, a speech disorder characterized essentially by an utterance defect but a remarkable preservation of reading aloud, and, in addition, a certain amount of disorder of understanding, in a case of general paresis with hemiatrophy of the left side of the brain.

Dr. HOCH: Dr. Carpenter's last case is of unusual interest, because of the association of a marked utterance defect with some evidence of difficulty in understanding spoken speech and—a disproportionately good ability to read aloud. This is certainly a rare occurrence and probably would not occur in a pure focal lesion.

Dr. WILLIS E. MERRIMAN read a paper entitled "**A Review of Cases of Manic-depressive Insanity not Early Recognized.**" Dr. Merriman pointed out that the most frequent mistake was that cases of the mixed type of manic-depressive insanity were regarded as dementia præcox. Other cases were first called toxic infectious, senile or alcoholic psychosis. He reported some cases in which the manic features were overlooked at first and gave the following conclusions:

In all, twenty-five cases in which the diagnosis required revision were reviewed, and in the great majority evidences of manic features were found in the records, such as productivity of talk, distractibility of attention with comments, emotional elevation or sudden fluctuations from laughing to crying or from affability to irascibility. Clouded orientation was frequent. However, strange irrelevant replies were also observed. For example, (How old is your brother?) "Five years chewing gum." (How do you know he sent you?) "There was a wreck near the hook and eye."

When hallucinations were present they were lightly regarded by the patient and had little influence on his conduct. They were not the subject of complaint and were often explainable on the basis of misinterpretations. Paranoid trends also misled. They were not uppermost in the picture and were apt to be manifold in manifestation and were given free utterance, having, for the objects of persecutory accusations, those who interfered with the liberty or wishes of the patient. Brief samples of flight were sometimes obtained at the time of admission and formed the only instances during the patient's stay. There occurred the possibility of the examiner overlooking such records, not having similar ones in his examination, even when the latter was completed before the end of the first week.

In addition, a case was reported in whom the diagnosis of manic-depressive insanity was made on admission, but who evidently belongs in the dementia præcox group, though he still presents certain manic features. This case may here be given in full.

J. McG. A man of 26 years. Mother of inferior mental make-up and sister in this hospital with dementia præcox. From patient's statement it was suspected he had had paranoid ideas and auditory hallucinations during the period of a year. In January he left his home in Troy to find work in Rhode Island. At this time the family had regarded him as well. In February he was committed to Bellevue

Hospital and then to Manhattan State Hospital, where a diagnosis of allied dementia præcox was thought probable and manic-depressive insanity was considered on account of a certain elation and rambling talk resembling that found in this psychosis.

He was transferred to the Hudson River State Hospital in March, where he continued to manifest a condition which resembled that of a manic state. He was voluble, smiled a good deal, and in his production there was a tendency to drift from topic to topic. However, while at the interviews he often talked constantly when started, his loquaciousness was without much push, and he spoke by no means very fast. He went from topic to topic. Striking was the fact that it was never interrupted by any distractibility, and had very little reference to the environment. There was much repetition of such phrases as "in a way," or "for the time being." There was a very pronounced sameness in intonation, a certain cadence which varied very little. As to his mood, one never felt that there was an elation of the frank sort, though he often presented a peculiar smile, but this was remarkably set and without mirth. On the ward he never showed any mischievousness. Sometimes the talkativeness was not present at the interviews, and he then answered without flight and much more relevantly. The peculiar ideas and the evidence of hallucinations which the patient presented, and his drifting utterances are sufficiently brought out in the samples which are here purposely given quite fully. On one occasion he said:

"Of course, as I say, myself, I would like to get a little information according to the customs—of course you could give me that information—maybe you know more about it than I do. I say myself I was out for a good time—always had it and don't see how it is I can't have it here—it seems pretty funny to me at the present time—I never was like I am here—I made my money on the docks in the city of Troy—worked hard all my life on the Citizens' Line—don't know how it is—it should come on me in that way—I have been in Melrose—I have been in Cambridge, New York—there is a pretty good university there—don't know whether for girls or men—I passed it by—I have been to Saratoga to the floral parade—he I asked for a black necktie and asked for my clothes and could'n't get it—which might not be in my dressing room up there—the State of New York grounds where I came over, I had an Englishman—it is an American soil—I had an Englishman here—that is in Poughkeepsie—I am pretty sure—I busted my water for the time being—I come from there here." (Will you tell us how the clock seems to bring wireless messages?) "It seems to me all right McG. open some one up—I just got that message now." (Do you hear actual words?) "I hear it through my ear—I heard from King Edward asking me how I was getting along—something kind of checks me off for the time being on some words they say—stops my power when I am going to say—something inside—it is very peculiar to me—I seen four stars above—that is

when I was sleeping—I seen a star last night and I see it disappear—you could just barely see it with your naked eye—I don't suppose anybody else could see it—I lost a child—the child was all right when I left Watervliet—of course I was making at that time—making pretty good wages for half a day, \$1.25 and \$1.50—nobody ever seen me working—I was off every afternoon to the matinees—that is in—(name of theater)—kind of a cheap variety—only 5 and 10 cents to run it now—they give pretty good shows at that—it is a great thing taking in burlesque shows—seems pretty funny—don't see why they stopped them in the city of Troy and run right along in Albany—on account of a young lady giving a famous dance—she was a girl in blue—the young lady dressed in black—had that in my mind about 19 years ago, I guess—seen it represented out there on the swing yesterday.”

Or another sample is as follows:

When asked about the clock, about which he had said recently that it talked to him, he said “it seemed to talk—telling me that I was all right—and the music said ‘you are all right—you are in the right place—you might be in the wrong place,’—that music reminded me of the music I heard in Watervliet, made in France—Brazil.” (What do you mean?) “The hobby horse—that is the way it was marked in a way—it sounded similar to that horse out in the yard” (the merry-go-round). (What about it?) “Well, you have got me up on that question—the power is shut off.” (What power?) “I can't say very much—I delivered newspapers to a gentleman who had a green fence—he was a lawyer—and there was always a lady there—his wife was at the door—she gave me the change—I delivered newspapers at the Island—there was no one there—I worked at the C. shop—made seven to eight to nine dollars a week—I worked for Mr. H.” (What about him?) “He used me all right—I drank considerably—I didn't pay much attention—I tried to get through in a hurry—the hardest time I had was on the Murray line Mr. M. was hard on me—the G—d—son of a b—. I liked him well enough—last summer I worked on the Citizens' line—made only 75 cents a day—they have their pick of the men—I never was blacklisted by a union—the foundry workers' union was the first organized at Murray's—I was on a strike with them—I paid so much for my permit—I went one night to find out my dues—it was damn funny how they used me there.” (What did they do?) “They didn't seem to want me to work—they seemed to black~~list~~ me.” (Who blacklisted you?) “I think these gentlemen here and their lady here—it seems funny how they wanted my life wherever I went—there is an electrical machine at Murray's—they got two volts into me—I was stinking drunk—no, not stinking drunk, but I had a good load—I went to one policeman, then I went to four of them, and the four took me to and I served ten days—I saw a new boat there, marked Washington, D. C., and they brought me to Bellevue—the doctor gave me a bath, I guess I was black on my hands—they kept me there one day and told me to go

along with the State doctor—I went to the State of New York grounds and they got the same electricity into me on the State of New York grounds.” (This refers to his stay on Ward’s Island.) “I got it taken out and I got it put into me again—then I was sent here—the gentleman who brought me here had red hair—he has changed since—he is not here now—I understood he was to be my private secretary when I came here—I understand this was an English pattern—this that I got into my system on American soil—as I understood by a doctor there—he might be from France—he told me I was crazy—I went under orders of myself—did not go under that French doctor . . . I came here in a coffin—there were odors as if they had a handkerchief around me to give me morphine—thought they were going to make me President of the United States—I was sworn in down stairs I should have my privilege—I should have my auto—I should inspect the railroads—I should go to Panama—all these orders are written in my head I understood that a suitcase came—I understood that Mr. Seth Low brought it, but I am not sure if he did.” Then he went on to say that this contained his uniform, on which was written “New York State Inspector, U. S. Army.” He continued: “My blood was taken by the American people down stairs out of me—it made me thin—my mind is all right—I demanded a gun on the State of New York grounds to shoot me.” Then he talked about one S. (Who is that?) “The man with a black moustache—that is the way my shoes tell me.” He had at that time been tapping the floor with his foot. “They talk like Teddy Roosevelt—my feet talk the same he does—I saw him on 23d street, before he got his power into me, that was fifteen years, and he says twelve years.” (What do you mean?) “That is the way the orders run in my head.”

So far as the patient’s statements were concerned, his orientation varied in accuracy, and there were many misinterpretations of identities of persons.

The early leaning of opinions toward a diagnosis of manic-depressive insanity in this case was due to the resemblance of the talkativeness and character of the talk to that of that psychosis, the explanation of his account of the clock and foot talking to him as not being of actual hallucinatory character, and the elated emotional tone.

Dr. D. S. SPELLMAN: The condition of the patient here presented was not quite clear to us while he was at the Manhattan State Hospital, partly because he was not altogether free in his responses, but chiefly because we had no anamnesis. However, there is some reason to think that the mother and sister are constitutionally inferior, and it is probable that the patient, too, was below the normal to begin with. We had some statements from the relatives in regard to excessive indulgence in alcohol, and of domestic difficulties. We found an indefinite paranoid trend of ideas, with great looseness in his thought content, the patient describing in unnecessary detail

many unpleasant incidents in his life, but owing to his reluctance to confide in the examiner, we got little further information. In relation to the patient's orientation, I felt that it was correct, although he persistently claimed that he did not know the year or his present location, but when I advised him to write a letter to his mother a few days after the original examination he gave his address and the time correctly, but, on again being questioned regarding the year, he would not give it.

In this case, considering the long duration, his paranoid trend, correct orientation, with looseness of thought content, etc., I would have no hesitancy in consigning him to the dementia præcox group, and feel that this condition is grafted on a constitutionally inferior state.

Dr. D. K. HENDERSON: I remember seeing this case at staff meeting when he was at Ward's Island. The striking features which he showed then and which he shows now are his apparent elation and talkativeness, but this elation is different from what we see in manic states. There the mood is bright, gay and rather contagious, while this man strikes one as being foolish. Moreover, there is no point to his utterances and his stream of talk is more disordered than we would find in a manic case. I think the prognosis is decidedly bad.

Dr. HOCH: I think the remark made by Dr. Henderson and others about the mood of the case here presented is very true. The mood lacks the freedom of the typical manic mood, and another thing which strikes me as quite important is the peculiar intonation which is quite stereotyped. The same feature is found in the stream of thought. His talk, however, is not so disjointed as it seems. He goes, in a reminiscent way, from topic to topic, telling us certain things that happened and this reminds him of something else, etc. It is, therefore, often not at all unlike a flight of ideas. Yet I have seen him when he gave much better answers and did not drift in his talk, so that he presents flight of ideas only under certain circumstances. I have also never seen any distractibility in him, and his lack of contact with the environment is shown in many other ways. Such a condition, especially when we take into consideration the peculiar ideas, is certainly not manic, and the prognosis is certainly very doubtful.

Dr. HAVILAND: With reference to paranoid trends occurring in manic-depressive insanity, I would say that only recently I had a case under my observation, who has been admitted to our hospital on four different occasions, displaying a frank manic excitement, but also in each instance evidencing the same paranoid trend, that her neighbors talked about her, wished to poison her, etc., or that her family physician wished to take her life. Such attacks were only of moderate duration and were always followed by recovery, she recognizing the falsity of her former beliefs. Paranoid trends occurring in manic-depressive insanity, are with us not at all uncommon.

During the past six years at the Manhattan State Hospital, the percentage of admission diagnosed as dementia præcox has steadily decreased. Corresponding to this we have a large increase in the number of cases diagnosed manic-depressive insanity. Formerly stress was sometimes laid upon the "silly, foolish laughter." Manics express their exhilaration sometimes in like manner. Formerly, many stuporous cases were diagnosed dementia præcox; some have since recovered, and we have learned that many such cases appear to bear relation to manic-depressive insanity. One feels that many cases of the mixed form of this disorder may have been mistaken for dementia præcox. Daily bedside observation is required in recognizing certain mixed phases. A stuporous case may exhibit a momentary flurry of manic traits—a brief awakening as it were—which may only be of exceedingly short duration. I might also say that my experience has been that the mixed cases ran a longer course than the acutely excited manics.

The presence or absence of hallucinations in manics is often difficult to ascertain. We ask them if they hear voices and the patient answers: "Sure I hear voices—I heard them all night." Frequently they will then contradict themselves and we find that they are only joking.

While considering the cardinal symptoms of the two psychoses, it would seem we derive the most aid in properly diagnosing, by studying the make-up, the psychogenic factors and mode of onset.

Dr. CHARLES B. DUNLAP read a paper entitled "**On the Relationship between General Paralysis and some Forms of Late Cerebral Syphilis.**" The paper will be published in the August number of the NEW YORK STATE HOSPITALS BULLETIN.

Dr. CHARLES I. LAMBERT, by the use of lantern slides, reported "**Two Cases of Congenital Defectives with Multiple Heterologous New Growths, Occurring in the Integument, Viscera and Central Nervous System;**" both cases were received from the Hudson River State Hospital by the Psychiatric Institute.

CASE I. M. D. This patient was an epileptic of 21, simple from childhood, unable to perform the simplest home tasks and became intractable, noisy, violent and destructive. At 15 her gait became shuffling and there was a tendency to drag the right foot; convulsions occurred almost daily; for a few months before death, at 21, there was hematuria and nausea and vomiting.

There were cutaneous nævi on the left forehead and right thigh. In the brain multiple gliomatous growths were found in the walls of the ventricles in addition to thick subependymal ridges. In the deeper marrow of the forebrain, several calcareous nodes, varying in size from one to three cm. in diameter, were found, the largest beneath LT₃ and T₄ and in the marrow of the right post-parietal

lobule. The cortex showed an over-development of the neuroglia and corresponding maldevelopment and misplacement of the nerve cells. In addition to the new growths within the nervous system, a large neoplasm was found in the left kidney, another pedunculated growth was attached to the colon; these were in the nature of angio-fibro-leiomyomata.

CASE II. J. H. K. This patient was a man of 37; his father and mother died at 73 and 75, respectively; both were said to have had syphilis; of ten children four died in infancy. The patient attended school from 5 to 13 but was dull and backward; after leaving school he drove a grocery wagon for a short time but did not get along very well, and after 20 he did practically no work. About this time he had "spells when his blood stood still and his body became dead and he would not realize what was going on about him;" these attacks were said to have persisted for only about two or three years. He would also frequently leave home and get lost. After 35 his eyesight gradually failed and more definite psychotic symptoms manifested themselves; he became over-religious, changed his faith, and for six months before admission heard God talking to him and granting him power to rule the world. On admission, nine months before death, he was dull and dejected, at times apprehensive; replies were difficult to elicit, but were simple and coherent; his orientation was approximately correct, attention drifting, grasp poor and retention limited; memory and judgment and insight defective. He became careless about his personal appearance; at times his appetite was voracious; sometimes he complained of "sleepy sensations" about his head and arms; there were no periods of amnesia. Physically there were no objective neurological signs except double optic atrophy and exaggerated knee-jerks. Death was due to acute dilatation of the heart.

There were numerous pedunculated outgrowths of the skin and a granular condition of the skin about the mouth and nose. The heart was enlarged, a not infrequent finding in these cases. Multiple new growths involved both kidneys which were about 12 by 25 cms. in size, and little normal kidney structure remained; in structure these latter growths resembled those of Case I.

The brain was of large size, the pia was clear over the convexity, slightly hazy over the base. The convolutions were full but considerably flattened and the sulci linear in appearance. Small cortical herniæ were seen on the basal portion of the temporal lobes. The optic nerves were thin, small and gray; the floor of the third ventricle was bulging and the hypophyseal stock was dilated; the pons was somewhat flattened and the medulla and amygdalæ formed a cone-shaped mass as a result of being forced backward and downward into the foramen magnum in consequence of increased intracranial tension. Transverse sections through the brain exposed dilated ventricles, the right about twice as large as the left. The medullary substance was considerably reduced, but the cortex appeared of about

normal and uniform width. The walls of the ventricles were rather nodular and uneven; in the vicinity of the foramina of Monro were two irregular tumor masses, about 2 cm. in diameter; these were nodular in outline, subependymal in position and partially infiltrated the underlying tissues, and almost completely obliterated the foramen of Monro on the right side. The tumor in the left ventricle was rather smaller than the one in the right.

In structure these tumors were composed of coarse spider cells, neurogliomatous in nature. There was also a tendency to colloid-calcareous infiltration of these tumors, but in no place were nodules found so large and firm as in the preceding case. The cortex in this case also showed evidences of excessive development of the neuroglia component and maldevelopment and misplacement of the nerve cells. Not infrequently multinucleated nerve cells were seen; again other cells seemed to possess certain features common to both neuroglia cells and nerve cells. A few lymphoid cells were seen in the pia and not infrequently mast cells, these latter were also occasionally seen in the sheaths of the cortical vessels but no undoubted plasma cells were seen in either the pial or cortical vessels.

These patients are retarded in development and seldom reach maturity; idiocy, imbecility and epilepsy with physical stigmata and maldevelopments are the more common conditions. The multiplicity of new growths and histogenic variety are of special interest. The apparent heteroplasia of the cellular elements in the central nervous system is deserving of further careful comparative study, a more detailed report of which will be undertaken.

Dr. WILLIAM C. PORTER read a paper entitled "**A Comparison of Various Methods of Formaldehyde Fumigation.**" This paper appears in full in another part of the present issue of the BULLETIN.

Dr. ROSS D. HELMER presented a "**Case of Spastic Paraplegia.**"

The patient is a woman of 51; admitted December, 1910.

Family history: Father had melancholia; a brother had two attacks of insanity, from which he recovered.

Personal history: When 18-19, she contracted syphilis. She became insane soon after, but recovered in nine months. She was normal for two months. Then, again had to be admitted to an insane hospital, but recovered. Her condition both times was characterized by excitement. During her mental illness she is said to have had a rash and bubo, and underwent antisyphilitic treatment. She married and had eight children, five of whom died in infancy, one having a marked rash at death.

In 1901 she developed a depression and was in a hospital for five months. At that time she had a "shuffling, ataxic gait," "absent knee-jerks," "Romberg" and "unequal pupils."

She was readmitted to this hospital Feb. 25, 1907. Previous to admission she was frequently depressed and agitated. While here she

was well behaved and showed no undue depression, but was unable to accomplish any work and realized the situation. She threatened suicide. Her memory was good for the remote past except that she forgot some dates. She had fair memory for immediate past. Her retention was poor. She had received no education in her youth and was unable to read or write.

She had good insight. Her speech at that time showed some slurring.

Physically she presented a fair general condition. The right pupil was much larger than the left, but both reacted very sluggishly to light and accommodation. There were no disturbances of the cutaneous sensibility; pain, tactile and stereognostic and muscle senses were normal. The temperature sense was also normal. The nerve trunks showed slightly diminished sensibility. Her strength was good and there were no paralyses. Her gait was modified. Romberg's sign was present and distinct. The cutaneous and deep reflexes were all exaggerated. Ankle clonus present. Plantar stimulation resulted in dorsal flexion of all the toes; because of the deformity of the toes dorsal flexion of the great toe and plantar flexion of others was impossible.

There were marked tremors of the tongue and extended fingers. The tongue deviated to the right.

The patient remained quiet and well behaved during her stay here. She gradually recovered from her depression and was considered mentally well in May. She was discharged after four months as recovered from recurrent depression.

The patient was again admitted to this hospital Dec. 3, 1910, aged 51, suffering from a depression which had been of four months duration. She was inactive, depressed, fearful and worried a great deal over trifles. Hallucinations and delusions were denied. Here she has been depressed, inclined to worry a great deal and is quite forgetful.

Her memory for both recent and remote past is poor. She is disoriented for day of month and year, is unable to tell the year of her birth, and displays poor memory for dates generally. Said, "It is hard for me to think."

Her retention is fair, and she has fair insight into her condition.

Her physical condition at present is as follows:

A fairly well developed woman 52 years old presenting a high narrow palate; enlarged lymph glands in groins, axillæ, and epitrochlear regions; deformed feet of the equinus type, and numerous old syphilitic scars on both legs and thighs. The body is covered with scaly skin. There are no defects in smell or taste sense. The lids and conjunctivæ are normal, as are also the mobility of the eye-muscles and the field of vision, although the patient complains of somewhat defective sight in the left eye. The pupils are round and unequal, the right being the larger. It reacts fairly well to light, directly and consensually and to accommodation. The left pupil is small. It reacts slightly and, to a limited extent, to light and consensually. The hear-

ing is impaired. Hears watch tick at about 4 c.m. from right ear and 16 c.m. from left ear.

There are no defects in her cutaneous sensibility, and she differentiates readily between pin head and pin point. Pain, temperature and tactile senses are acute. She presents tremors of the lids, tongue and facial muscles, especially about the mouth, also some smoothing out of the right face. The tongue deviates somewhat to the right. The patient presents good muscular functions in the arms, although they are quite tremulous, and show some inco-ordinations, as demonstrated by approximating the tips of the index fingers at arms length with eyes closed. Also in touching fingers to nose the tremor comes out fairly well and at the end, the tremor becomes quite coarse. The tendon reflexes of the arms are exaggerated with marked tremor of the hands and fingers. She also shows considerable Romberg swaying. In the legs, it was found on admission, that a slight touch on the patellar tendon produced three or four oscillations of the foot and leg, a harder touch produced a clonus, and striking the quadriceps muscle produced the same effect. This condition not marked at present. Ankle clonus is obtainable on both sides, but perhaps slightly more marked on the right side. The tendo Achilles reflexes are found slightly increased on both sides. The superficial reflexes are not altered so much. The umbilical is very slight. Babinski is obtainable in both feet. Examination of the respiratory system is negative. In the circulatory system it was found that the arteries are considerably sclerosed, and that the patient also has a mitral regurgitation.

The legs are considerably atrophied. The muscles are smaller than normal, but are quite hard and tense, due to the spasticity. It is almost impossible to move the legs freely either actively or passively. In walking the patient steps on the toes, and, in advancing one leg ahead of the other, she moves the legs as a whole and has a limited use of the ankle and knee joints. The thighs are adducted and rotated inward so that the patient toes in. The knees are also approximated and have a tendency to overlap one another. She complains of a great deal of stiffness in her legs, especially upon arising in the morning. Crossing the knees is accomplished with a fair degree of ease. Kneeling is difficult and accomplished only by holding on to chairs, etc., and assisting the legs with the hands.

Lumbar puncture performed January 10, 1911, gave less than one lymphocyte per oil field.

Differential diagnosis: In the differential diagnosis Erb's syphilitic spinal paralysis and ataxic paraplegia are to be considered. In the former the tendon reflexes are greatly increased, but the muscular rigidity is slight in comparison to the great increase of the reflexes. There is rarely much pain. The sensory disturbances are slight, but there may be parathesias and girdle sensations. The bladder and rectum are also involved. Improvement is not an infrequent occurrence.

An ataxic paraplegia, usually follows traumatism or exposure. The patient complains of an unsteadiness of gait. The reflexes are exaggerated, but ankle clonus is not always present. Rigidity of the legs comes on, but is not so marked as in spastic paraplegia. Oppenheim saw a case develop in a man 59 years who had an acute transmyelitis at 14 years of age, which left behind only the spastic symptoms. Inco-ordination is a well-marked feature from the outset. There is difficulty in walking in the dark. The patient uses a stick and keeps eyes on the ground. Sensory symptoms are rare and eye complications are late.

Dr. HENDERSON: I recall a case of spastic paraplegia who came to autopsy. This patient was a man of 30 who had shown spasticity of gait for six years. Under observation he presented a certain apathy and mental dullness, but his memory and behavior showed no abnormality. His pupils, speech and writing were normal. Spasticity of the legs was the most prominent symptom and there was double Babinski. A lumbar puncture showed an increased cell count. Towards the end of a rather protracted course he showed some defect symptoms, but his speech remained normal. The autopsy showed the case to be one of general paralysis.

Another case is a man who has been at the hospital for nine years and his condition started with a spastic gait about two years previous to his admission to the hospital. He is undoubtedly, I think, a case of general paresis. During the whole course of his hospital residence he has been elated and has had grandiose ideas. One pupil reacts slightly and the other is an Argyll-Robertson pupil. There is no speech defect, but a slight writing defect, not marked. There was a positive cell count and a positive Wassermann reaction. He also shows a spastic condition with double Babinski. The course has been peculiar. In 1907 the case was noticed to have absent reflexes and in 1910 exaggerated reflexes. In 1907 we could not account for the difference. He was tremendously spastic at that time.

Dr. SHERMAN BROWN: We have a case at Kings Park in a man of 38 years of age. He recovered once, but in six months returned with another attack. He has exaggerated knee-jerks, ankle clonus, Babinski, spastic gait, Romberg. His nervous disorder is diagnosed as lateral sclerosis. Mentally, he was elated, orientation was somewhat impaired, he had some hallucinations of hearing, expressed some absurd delusions, was loquacious, and showed some motor unrest. A diagnosis of general paresis was made, but this was ruled out, owing to negative lumbar puncture. The case presents the features of an organic nervous disorder in which a psychosis not unlike a manic-depressive insanity has occurred. The recovery from the first attack was followed, in six months, by a subsequent attack, from which there has been almost a complete recovery. In this case it would appear that the mental disorder is not in any way related to the accompanying nervous disease.





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FOCAL SYMPTOMS IN GENERAL PARALYSIS.*

BY C. MACFIE CAMPBELL, M. D.,

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General paralysis presents many problems both to the clinician and to the pathologist. The clinician meets these problems at every stage of the disorder, and a merely casual review of their nature would already bring us into contact with almost every other important group of mental disorders. Even where the diagnosis is clear, the meaning of the various elements in the clinical picture, and the reason of the great variety in the relative prominence of the individual symptoms are quite obscure. The differential diagnosis of general paralysis in its incipient stages from certain functional psychoses, from conditions due to exhaustion or to the action of various poisons is not always easy; in the later stages it may be extremely difficult to differentiate between general paralysis and other organic dementias arising on the basis of cerebral syphilis, brain tumor, cerebral arteriosclerosis, senile brain atrophy, etc. In the clinical picture of the organic dementias focal symptoms frequently play an important rôle, and in this communication I propose to discuss some points with regard to the focal symptoms in general paralysis.

Focal symptoms may be present in a case of general paralysis without there being any evidence of a direct relationship between the cause of the focal symptoms and the general paralysis; this is, for example, what is found in certain cases with traumatic lesions. I may refer to a case of general paralysis with complete anosmia, recently observed in the clinical service of the Psychiatric Institute. The anosmia was due to the destruction of the olfactory lobes by a fall in the hunting field, which occurred thirty years before the onset of the general paralysis.

In cases with traumatic incidents the situation is not always so clear as in the patient with anosmia of traumatic origin. One of my patients had on two occasions a rather severe injury in the period of the insidious onset of general

* Paper read before the American Medico-Psychological Association at Denver, Colo., June 19, 1911, and the Quarterly Conference held at Binghamton State Hospital, October 6, 1911.

paralysis; on the second occasion there was evidence of fracture of the base of the skull, followed by a traumatic delirium. In the clinical picture which the patient presented under observation aphasic symptoms and weakness of the right side were present in addition to the physical symptoms of general paralysis. At the autopsy there was found some cortical softening in the peri-sylvian region, but even after microscopical study of this area it was difficult to say what rôle had been played by the trauma and by the general paralysis respectively in its causation.

I have mentioned these cases merely to indicate the general range of the topic, and shall pass now to cases where the focal symptoms are more intimately related to the general paralysis. They may be related only indirectly to the general paralysis, inasmuch as they have their origin in the same syphilitic infection; they may be related very directly to the general paralysis and be due to the special severity of the paralytic process in definite regions of the cortex (Lissauer's atypical paralysis).

I shall begin with a case of a very familiar type. The patient, a janitor, at the age of 33 had a left-sided hemiplegic attack without loss of consciousness; the attack left slight permanent weakness of the left side. Nine years later the insidious onset of general paralysis began, the disorder ran a typical course and the patient died at the age of 45. The postmortem examination disclosed the typical histopathological changes of general paralysis; in addition there was endarteritis obliterans, with aneurysmal dilatation and occlusion of the cerebral vessels which had caused a sub-cortical softening in the region of R. F. 3.

A hemiplegic attack at the age of 33, in the absence of valvular heart disease or any general infection, may safely be attributed to a syphilitic disorder and usually arises on the basis of an endarteritis obliterans (Heubner's type). In the present case the autopsy confirmed this view. We had to deal therefore with a case of general paralysis, which, at an earlier period, presented evidence of syphilitic cerebral vascular disease. In view of the fact that general paralysis seems only to occur in patients, who, at a long

antecedent date, have had syphilis, it is not at all to be wondered at that at an earlier period the brain, its vessels or its membranes, should be affected by the syphilitic poison. In such a case the neurological history of the patient is divided into two periods separated by a long interval of time; the incidents of the early period seem to have little to do with the history of the later period, and the evolution of the general paralysis seems in no way influenced by the residuals from the earlier period. At each stage the diagnosis was clear to the clinician; the pathologist could easily demonstrate two processes side by side—the special type of degeneration of the larger vessels, and the characteristic histopathological changes of general paralysis.

The situation is not always so clear as in the above case, and the history of the following patient shows an evolution in which the different stages are by no means so clearly delimited.

The patient, a journalist, had a chancre in 1898, for which he was treated during a period of six months; in 1901 he had diplopia, which improved under potassium iodide. In April, 1902, he had an attack of weakness of the left side which came on during a period of twenty-four hours, without loss of consciousness; the diagnosis of cerebral syphilis was made. The patient improved under treatment with potassium iodide. In November, 1902, he had a second attack of left-sided weakness, with transitory inability to speak, but without loss of consciousness. He received hypodermic injections of mercury, and also took sodium iodide; under this treatment he improved. During the following three years he suffered from occasional headache, and in 1905 he was unable to keep his position. He complained of increasing weakness in the left leg, he fell on more than one occasion; he complained that his memory was failing. From January to August, 1906, he was in a hospital where he had vigorous antisymphilitic treatment; he received as much as 390 grains of potassium iodide daily, he was also treated with hypodermic injections of the mercuric salts. During this period he had convulsions on

several occasions ; he was sometimes restless and noisy, he wanted to take a stroll along the river, he had hallucinations of hearing, and was apt to ramble on about imaginary things.

In August, on admission to the clinical service of the Psychiatric Institute, he was childishly happy, affable, loquacious, amused by details. He admitted that he had no grounds for his euphoria, and said that he had "not a dam'd cent;" as to his physical condition he said "it's a terrible plight—I don't suppose I will ever get well again;" he laughed cheerfully at the situation. The patient complained of his memory being poor, but was able to give a connected account of his life ; he made several careless mistakes, but was able to correct these as a rule. He said that the interval between the two admissions to the New York Hospital on the occasion of his hemiplegic attacks was eighteen months, when as a matter of fact it was only six. He was very much confused over the incidents of the immediate past, confused his present environment with the hospital from which he had come.

Physical status : left-sided hemiplegia, not involving the face ; no sensory disorder ; the left knee-jerk was more exaggerated than the right ; tremor of hands and face ; the pupils, equal but irregular, reacted well to light and on accommodation ; the speech was tremulous and sticking but without any distortion of the words even in difficult test phrases ; the writing was extremely tremulous, the words were crowded up into one corner of the paper, but were correctly written. Ten days after admission the patient had a series of convulsions, with special involvement of the right side, leaving some weakness of the right arm and marked paraphasia ; he died twelve days later.

The cortex showed the characteristic histopathological changes of general paralysis ; there were several foci of softening, one involving part of R. F. 1, of R. F. 2, and of the upper fourth of R. A. C, another involving the head of the left caudate nucleus and the anterior fourth of the putamen on the left side ; foci of softening were also found in the marrow of the left occipital lobe and in the pons.

There was well-marked endarteritis obliterans. In this case the clinical history does not divide itself into such distinct periods as in the previous case, but seems to present the evolution of one process in which no definite line of demarcation can be drawn. There is not, as in the previous case, the long incubation period intervening between the first series of neurological incidents and the later onset of a process of a different kind. In the present case the clinical picture of brain syphilis passes insidiously and without any long incubation period into that of general paralysis. The whole course of the disorder, its early incidence after the initial infection, the nature of the early symptoms, viz., diplopia, headache, hemiplegic attacks, and in the later period the absence of grandiose ideas with the retention of fair insight into his physical decline and into his defective memory seemed to indicate brain syphilis; the euphoria was a somewhat striking feature, but we know that it frequently is found in cases of brain syphilis; the memory defect, in its setting of a certain mild confusion and difficulty of orientation, could not be considered pathognomonic of general paralysis. At the beginning, therefore, the process appears to have been that of brain syphilis as evidenced by the close relation to the initial infection, by the symptomatology, by the pathological evidence of endarteritis obliterans with consequent focal softenings, while at the end there was no doubt about the process of general paralysis, as evidenced by the typical histopathological changes in the cortex.

At what stage in the evolution of the patient's sickness did it take on the serious character associated with the progressive changes of general paralysis? After all, we must remember that we have no grounds for maintaining the unitary nature of the changes in general paralysis. Thanks to the researches of Nissl and Alzheimer we have a definite histopathological criterion which enables us to group our cases uniformly according as they do or do not satisfy that criterion. That this criterion is not the essence of the process is evident from the fact that Nissl found the same histopathological changes in the cortex of a dog and two

rabbits. The importance of the histopathological criterion is, that it enables us to start from a homogeneous group when we discuss the subject of general paralysis, and that it makes possible a common understanding. The meaning of these histopathological changes is quite obscure, and Nissl himself has raised the question whether they represent a unitary process or whether certain elements in the pathological picture may not be a direct syphilitic manifestation, while other elements may represent a process of a different type.

In the clinical history of the foregoing case we face a series of incidents and a development which become more intelligible if conceived as the expression of more than one process, one process not merely succeeding the other but having its own evolution side by side with the other.

The difficulty of coming to a decision as to whether a case is one of general paralysis or of brain syphilis is further exemplified in the following case; the clinical history was in many respects similar to that of the previous case, no final clinical diagnosis could be made, the autopsy disclosed multiple gummata in the brain.

The patient, a janitor, 47 years of age on admission, contracted syphilis in 1891, at the age of 33; in the summer of 1900 he had strabismus of several months' duration. In September of the same year he had an attack of dysarthria and staggering; in September, 1901, weakness of the right leg developed, his speech was somewhat defective. From this time he had residual weakness of the right leg and during the following two years he had several attacks of right-sided weakness with involvement of speech; on one occasion he was said to have had an attack of weakness of the left arm. In July, 1905, he had an apoplectiform attack followed by a stuporous condition and a delirium of several weeks' duration, which led to his admission to the hospital in August. In October he developed transitory left-sided ptosis. At that date his physical status was as follows: Weakness of the right face, arm and leg; on both sides sign of Babinski and ankle-clonus; left internal ophthalmoplegia; the right pupil reacted slightly to light, well

on accommodation; fundi normal; the speech was slurring, slightly sticking, without omissions or transpositions, but with the occasional insertion of *r*; the writing was tremulous with omissions and distortions, *e. g.*, "methis espical" for "methodist episcopal," "bittililery" for "artillery"; lymphocytosis of the cerebro-spinal fluid. Particular attention was paid to an analysis of the mental state of the patient as the diagnosis was a matter of considerable doubt. On admission he was a trifle excited and pugnacious, but soon settled down to a condition of placid good humor; he said that he was happy, felt first-rate; he did not resent being with crazy people; he knew the date, called the place "Manhattan Life Insurance—Bellevue Hospital." He gave a rather poor outline of his life with marked discrepancies in his dates. He had no adequate realization of his general condition. During his hospital residence his mood continued to be one of exaggerated complacency with a tendency to whimper when talking of home. He felt that he could resume his old work but showed no megalomaniac trend. This mild euphoric dementia, with the type of memory defect presented by the patient, pointed in the direction of general paralysis, and the nature of the writing defect seemed to support this diagnosis; the neurological history with its varied incidents seemed to point more in the direction of cerebral syphilis. We have, however, already seen from the preceding case that such a neurological history is not incompatible with the development of general paralysis. The unilateral ptosis with complete fixity of the left pupil was the most definite evidence of cerebral syphilis; in the preceding case, however, diplopia had been one of the earliest symptoms.

The autopsy showed general cloudiness of the pia, frontal atrophy, ventricular granulations; there was a gumma in the left centrum ovale, another in the right parieto-occipital fissure; an old softening of vascular origin was found in the right internal capsule and thalamus, another in the left side of the hindbrain involving the pyramidal tracts; the larger vessels showed a definite endarteritis obliterans. The cortex showed preservation of the general structural

arrangement; there was no diffuse plasma-cell infiltrate. The meninges showed a syphilitic meningitis of varying grade with slight extension into the cortex; this is a form of syphilitic disorder to which Dr. Dunlap has especially called attention, and which approaches most closely the condition found in general paralysis.

If I have reported these two cases in somewhat tedious detail, it is because I feel that the difficulty of differentiating clinically between general paralysis and cerebral syphilis is not sufficiently realized; it is true that certain symptoms have considerable value in pointing very strongly in one direction or in another, but we must recognize that in a certain number of cases, even after the most careful weighing up of the various symptoms, the only honest course is to withhold a diagnosis until the microscopical examination enables us to definitely classify the case.

These considerations are still valid notwithstanding the introduction of new methods into psychiatric procedure. It has been hoped that an infallible laboratory method might enable us to dispense with tedious clinical arguments. The introduction of the Wassermann method marks an important advance in our knowledge of general paralysis; it gives us direct evidence of the connection of general paralysis with syphilis, a connection which previously had merely the support of statistical evidence. It does not, however, always solve our clinical problems, and simply furnishes one more datum to be taken into consideration in weighing up the evidence with regard to the diagnosis. That is difficult, even with the help of the Wassermann reaction, to determine the exact stage of the evolution of the disease in the individual case may be seen in the following case:

Gennaro P., a wood-carver, had syphilis at the age of 19; at the age of 40, in December, 1907, he had an apoplectiform attack with residual left-sided weakness. After this attack he was inefficient at work, treated his wife outrageously, and finally was certified as insane. On admission he presented slight weakness of the left side, Argyll-Robertson pupils, no defect of speech nor of writing, no tremor of the

fingers; the cerebro-spinal fluid showed lymphocytosis and increased globulin; both the blood serum and the cerebro-spinal fluid gave a positive result with the Noguchi modification of the Wassermann reaction (Dr. Henderson). The mental state of the patient was one of mild complacency with slightly inadequate realization of the gravity of the situation; his memory was slightly defective.

In such a case we are entitled to attribute the hemiplegic syndrome to a syphilitic endarteritis, although certain reservations on this head must be made later. Argyll-Robertson pupils are not frequently found in cerebral syphilis and point much more strongly towards general paralysis. As to the Wassermann reaction it is just in such a case that we realize its limitations, for although the positive reactions increase the probability of the case being one of general paralysis, the possibility of cerebral syphilis is not excluded. The necessity of basing conclusions with regard to the differential value of the Wassermann reaction on material that is controlled by autopsy, is obvious in the light of cases such as those which have been briefly referred to.

The discussion of the above cases has shown how closely the question of the focal symptoms in general paralysis is bound up with the problem of the fundamental nature of the disorder and of its relation to syphilis.

In a paper on arteriosclerosis in relation to mental disease read before this association at a meeting in Washington (May 8, 1907), I made a brief reference to a patient, the diagnosis of whose case was a matter of great difficulty. The patient had begun to fail at the age of 45; from that date his memory became progressively worse; at the age of 58 he had a general convulsion. During the following two years he showed progressive mental decline and a variety of neurological incidents. In view of the absence of knee-jerks, the presence of the sign of Romberg, a well marked lymphocytosis of the cerebro-spinal fluid, the diagnosis of tabes dorsalis was made. In view of a permanent right-sided hemiplegia and right-sided sign of Babinski, with numerous transitory left-sided attacks the additional diag-

nosis of advanced arteriosclerosis of the basal vessels with focal softening in the left occipital region was made.

The mentality of the patient throughout his stay in the hospital was that of "the lean and slipper'd pantaloon;" he was amiable and mildly jocose, but at no time showed definite euphoria and never uttered any ideas of grandeur. The writing of the patient showed very marked tremor and great distortion of the words. The reaction of the pupils to light became more and more sluggish during his stay in the hospital; the speech was extremely slurring but did not present the features which are so characteristic of general paralysis. The possibility of general paralysis was considered, but it was felt that there was not sufficient evidence to make a positive diagnosis of general paralysis. The autopsy seemed to confirm the clinical diagnosis; the vessels of the base of the brain showed a very extreme degree of diffuse thickening and the left visual cortex was destroyed by a large area of softening due to the occlusion of a thickened artery; the pia was not markedly thickened and the brain showed a rather diffuse mild degree of atrophy. In addition to the damage due to defective nutrition resulting from vascular thickening, symptoms had been caused directly by the pressure of thickened tortuous vessels; the right optic tract was reduced practically to a ribbon by the pressure of the adjacent posterior cerebral artery.

On microscopical examination the typical histopathological changes of general paralysis were found. The necessity of microscopical examination before making any final statement as to the nature of such a case is well shown by this case, where the autopsy gave no indications of general paralysis. The anatomical evidence enabled one to see that in this case, as in the other cases already referred to, for a considerable time there had been going on side by side the evolution of the two processes, the process of general paralysis on the one hand and on the other hand various changes due to disease of the larger vessels.

In a certain number of cases of general paralysis with focal symptoms the latter are due to the special severity of

the paralytic process itself in definite regions of the cortex; such cases were described by Lissauer under the heading "Atypical Paralysis," in contrast with the classical type of general paralysis, where the greatest severity of the process is in the prefrontal and frontal region and where focal symptoms of motor or sensory nature are absent. The paralytic process in such cases is most marked in the posterior half of the cortex, the degree of destruction is more pronounced than in the classical form, secondary degenerations can be demonstrated in relation to the affected areas; the clinical course of these cases shows certain characteristics, it is apt to be a less uniform decline than in the classical form, and to consist rather in a descent by steps, the downward steps usually corresponding to a series of attacks; the total course is apt to be longer than in the classical type, and the clinical picture frequently presents considerable difficulty in diagnosis. Between the atypical general paralysis of Lissauer and the classical type all transition forms can be found.

To the pathologist and the clinician these cases furnish extremely important problems, but in this communication I shall merely have time to take up one or two points. A case which has just recently come to autopsy is worth reporting in this connection. The long duration of the case, the stationary nature of the symptoms, the keenness of the patient and the absence of any memory defect made the diagnosis of the case extremely difficult.

The patient was a man of 37, who had followed a variety of occupations, from jockey to machinist, and been temperate in the use of alcohol; at the age of 26 he had a chancre, for which he received treatment during one month. Four years later he began to suffer from pains in the back and chest, accompanied by nausea and vomiting; during the next six years he continued to have these pains.

At the age of 34 he had a transitory episode of weakness and numbness of the left side; two years later he was diagnosed "incipient locomotor ataxia." At that time he presented Argyll-Robertson pupils, diminution of the knee-jerks, slightly tabetic gait, tenderness over the hypogastrium.

In the following year he began to show a grandiose trend, he wished to take his physician for a carriage ride, he talked of plans for working a patent, wished to move into a better house, he asked a girl in a store to marry him and knocked her hat off when she refused. Owing to this behavior he was certified as insane.

On admission he was talkative and elated, said that he was worth \$90,000, the patent was worth over three millions, he was a first-class prize-fighter; the physical status, as then noted, was Argyll-Robertson pupils, knee-jerks decreased, speech defective.

For some months the patient remained megalomaniac and somewhat excited, he then became depressed and hypochondriacal; on several occasions he had attacks of vomiting and of severe pain in the side. He had a variety of other attacks; in May, 1903, he had an apoplectiform attack which left him with slight left-sided weakness.

In the following year, in April, he had several convulsive attacks, and it is probable that the hemianopia, which was later observed, dated from this series of attacks.

In the summer of the same year (1904) he had an excited period with well-marked megalomania; he was a millionaire, owned the hospital and the White House, had been nine million years on earth; "I am McKinley, I'm greater than God Almighty, I own the world and have got billions upon billions of dollars."

This megalomaniac condition lasted for several months and then simmered down; during the following year (1905) he showed definite depression with a marked hypochondriacal trend; his detention was unjust, his lungs and heart had been knocked out of him, his food was doctored so that his bowels did not move, nothing ever passed out of him. At the same time the patient showed excellent grasp of all relations not touching his own condition.

During 1906 there was little change in the patient's general condition, he had occasional convulsions and periods of weakness, he said that his bowels were stopped up by poisons in the food, there was steam in the bed, the mattress was charged with electricity. He did not elabo-

rate his depressing delusions into any system; at times he was unable to resist shouting out these accusations, but at other times he would spontaneously criticize himself for this abuse, and admit the possibility that he was mistaken; perhaps the bed was not magnetized, perhaps it was merely his nerves, he might be slightly crazy; "the devil must have got into me yesterday saying such crazy things—I was calling people murderers, I must stop that, it's nonsense."

He would pay a daily visit to the physician in his office and ramble on about his experiences in life; although he would frequently refer to his unjust detention and to his paranoic ideas he did not press the physician for his discharge; he would pass abruptly from bitter complaint to good-humored gossip about life in hospital and at home, he commented with much shrewdness on his fellow-patients and discussed newspaper topics in an intelligent manner. He was pleasant and humorous in his conversation, and took considerable pleasure in recounting his exploits in the past. His memory was extraordinarily good; he remembered all his transfers during his hospital residence and could give correctly the number of each ward in which he had been. He made light of his physical ailment and felt sure that he could easily earn a living; fresh air and city doctors would cure him, he could get a job as night watchman, could make money as an entertainer, could publish a book of his experiences.

The physical status in July, 1906, was as follows: Residuals of a left-sided hemiplegia, slight weakness of the left face, arm, leg, sign of Babinski on the left side, impairment of sensibility on the left side, left-sided hemianopia, athetoid movements of left hand, marked ataxia of left arm and leg. The knee-jerks, diminished in 1901, were now definitely exaggerated, the right being occasionally more active than the left (due to spastic condition of the left leg). Argyll-Robertson pupils; nystagmus in lateral vision; general diminution of pain sense; sign of Romberg; speech somewhat slurring, without tremor, sticking or distortion of words; writing tremulous with marked distortion

of the test words, *e. g.*, "mthosit episocpil" (methodist episcopal); marked lymphocytosis of the cerebro-spinal fluid.

During the following five years until the time of his death the patient showed remarkably little change either in his mental or in his physical condition. He had occasional periods of depression but as a rule was bright, alert, interested in the newspaper and in hospital affairs; a very careful examination of his memory in 1910 showed one or two trifling lapses, although his memory was still excellent. He still talked with confidence of his own abilities, and claimed to have personal influence with the governor; his hypochondriacal complaints were unchanged and he had a number of poorly elaborated delusions. In his physical condition there was little change, the writing was rather better than in previous years, although he distorted one letter and wrote "thirld" for third. The cerebro-spinal fluid showed a marked lymphocytosis with positive globulin reactions, but negative Wassermann (Noguchi's modification); the Wassermann (Noguchi) reaction with the blood-serum was positive (Dr. Henderson).

The patient during the latter years had a series of attacks of a somewhat peculiar nature; immediately after the attack he would be quite clear and remember every detail up to the onset of the attack. He made light of these attacks, and frequently had occasion to say, "I'm no paretic."

On May 28, 1911, the patient at 7 a. m. had one of these apoplectiform attacks and fell heavily on his head, causing a sub-dural hemorrhage; when examined at 9 a. m. he made light of the attack, protested against being detained in the hospital, stated accurately to a day how long he had been detained. Ten minutes later he became unconscious, during the rest of the day there was marked twitching of the right side of the body, the patient died at midnight without regaining consciousness.

The difficulties presented by such a clinical history are obvious. The prodromal period with apparently tabetic symptoms, the gradual onset of an elated and megalomaniac

condition, the periods of florid megalomania, the pronounced hypochondriacal trend, seemed to indicate general paralysis, a diagnosis which was further strengthened by the presence of Argyll-Robertson pupils and the special defect in writing. The hemiplegic syndrome—left-sided weakness, impairment of sensibility, hemianopia, with athetoid movements of the left hand, suggested in addition the presence of a focal softening involving the posterior limb of the capsule, the optic radiations and the optic thalamus; the athetoid movements of the left hand indicated the involvement of the optic thalamus.

It was somewhat difficult, however, to reconcile the diagnosis of general paralysis with the striking preservation of the memory of the patient, and with the lack of progression of the symptoms.

At the autopsy a large recent sub-dural hemorrhage was found over the right hemisphere; this, however, only partly accounted for the contrast between the flattened right hemisphere and the well-rounded convolutions on the left side. The right hemisphere showed a very considerable degree of atrophy in comparison with the left hemisphere, the convolutions were narrower, and although the sulci were not specially wide this may have been due to the recent hemorrhage. The pia did not show any definite thickening; there was no special atrophy of the frontal lobes; no granulations in the fourth ventricle were seen by the naked eye. The basal vessels were in good condition except for a patch of thickening in the right internal carotid just at its bifurcation.

On a horizontal section which passed just at the upper limit of the optic thalamus on the left side and slightly above it on the right side, the right hemisphere presented a very marked diffuse atrophy of the medullary substance, with no focal lesion; the cortex did not present any very marked difference on the two sides.

Another section was made just below the level of the middle of the thalamus on the right side without any focal lesion being found. The pons showed hemorrhagic infarction. Numerous blocks were taken from the cortex for

microscopical study and the brain was placed in Miller's fluid to be later cut in serial sections.

The microscopical sections showed the typical histopathological changes of general paralysis, which were more marked on the right side than on the left; the pia showed an exudate of plasma-cells and lymphocytes, the general structure of the cortex was disorganized, with considerable loss of nerve cells; there was a diffuse peri-vascular plasma-cell infiltrate throughout the cortex.

I do not intend to discuss the numerous problems which arise in regard to this case. I wish to emphasize one point which it demonstrates, viz., that in a case of general paralysis, of ten years duration, with the process much less marked in the left than in the right hemisphere, the memory may remain practically intact and the general mentality of the patient may show very little evidence of progressive reduction.

The case again warns us to be careful in the use of clinical material which is not controlled by autopsy, and illustrates the value of the modern histopathological criterion. It makes us accept with reserve cases published before the last decade, for the classification of this case, even with the help of the microscopical findings, would have been extremely difficult before the publication of the work of Nissl and Alzheimer.

The fact that we correlate the left-sided syndrome with the right-sided cerebral atrophy does not mean that we have any adequate understanding of the disorder; the correlation is of a rather crude kind, and we are far from understanding the intimate mechanism of the clinical symptoms. We are equally far from understanding the factors which lead to the definite topographical distribution of the severity of the paralytic process. It is certain, however, that it can not be explained on the basis of lesions of certain cerebral vessels, for the distribution does not as a rule correspond with vascular territories and the microscopical examination of the vessels frequently fails to show any alteration sufficient to account for the particular severity of the cortical disorder.

The fact that a pronounced right-sided cerebral atrophy may be accompanied by such a moderate degree of mental reduction is of considerable interest, and in this context I should like to briefly mention another case, presenting several features in common with that of the patient already reported.

The patient, 47 years old at the time of his death, a tabetic general paralytic, had been over three years in the hospital, he had been definitely insane for four years before his death, he had shown slight mental symptoms for at least nine years before his death. He had numerous left-sided attacks, with a permanent left-sided syndrome—hemiplegia, hemianesthesia, hemianopia.

No focal softenings were found in the brain postmortem, but the convolutions of the right hemisphere were extremely shrivelled, and furnished a striking contrast with those of the left hemisphere. The patient, however, at the time of his death was very far from presenting the extreme degree of mental reduction which is found in many patients, whose brain show nothing like the degree of atrophy shown by the right hemisphere of this patient. The description of one of his attacks, two years before death, may be of interest in this connection. On August 12, the left arm and leg began to twitch, without involvement of the face. There was no impairment of consciousness; he was talkative, referred spontaneously to the twitching, said that he was certainly going to die in the evening. He wanted to go home and settle up his household affairs. "I know I am dying, I want to speak with my three children, to be good to the mother when I am no more. I am very sorry if I must die, I will be 45 on Christmas (correct), do for me what a poor man, a dying man, expects, put me in two blue blankets and in the ambulance, want to die with my woman." The twitching in this attack lasted for two days.

The lucidity of the patient during such an attack, with symptoms due to some active process in the right cerebral cortex, and the fact that his mental reduction later was not extreme while the right cerebral cortex showed an extreme

degree of shrivelling, leads us to ask how far the degree of dementia has to be correlated more strictly with changes in the left cerebral hemisphere and not so much with the cerebral atrophy as a whole.

From this point of view it will be of interest to pay particular attention in our cases to the relative involvement of the two sides of the brain and to see whether this may help us a little further in our work of clinico-anatomical correlation.

In concluding, I should like to call attention to one group of cases of general paralysis with focal symptoms, the consideration of which should prevent too premature an interpretation of the relation of clinical symptoms to the pathological findings. I refer to that group of cases where even a conscientious and systematic examination of the brain reveals no focal softenings, no focal exacerbation of the process of general paralysis, in short nothing which we can correlate with the clinical symptoms.

Out of a series of twenty cases of general paralysis with focal symptoms, in six there was no pathological evidence of any focal disorder; in another case with a permanent hemiplegia, which had been diagnosed previous to admission as thrombosis of the internal capsule, no lesion of the internal capsule was found, nor did the motor cortex on the suspected side show any definite difference from that on the other side. There are limits of course to our technical methods, and an examination can never cover absolutely exhaustively the territory suspected, but the lesson from these cases is, perhaps, that we must learn to think in more functional terms of these symptoms, especially where we are dealing with focal symptoms of a transitory nature.

The points which I have desired to call attention to in this communication are as follows:

SUMMARY.

I. Cases of general paralysis may present focal symptoms which are more or less irrelevant to the general paralysis, *e. g.*, focal symptoms of traumatic origin.

II. Cases of general paralysis may present focal symptoms, which are based on a process which has a common origin with the general paralysis, *e. g.*, symptoms due to softening on the basis of a syphilitic endarteritis.

III. The evolution of a case, which at an early stage presents evidence of syphilitic vascular disease, into a case of general paralysis may be more or less rapid and the clinical picture may represent a combination of more than one process.

IV. The exact stage at which the onset of the general paralysis has begun is extremely difficult to determine, even with the help of modern serological methods.

V. The clinical picture alone is sometimes insufficient to enable a positive diagnosis to be made, the autopsy itself may not be decisive, the microscopical examination of the cortex is essential for a decision.

VI. The pathological criterion of certain histopathological changes is invaluable, but the relation of these changes to the disease process is quite obscure.

VII. Focal symptoms in general paralysis may arise on the basis of localized severity of the paralytic process.

VIII. In the case reported, of ten years duration, there was remarkably little mental reduction, but the paralytic process especially involved the right hemisphere.

IX. The relation of dementia to the right and left hemispheres, respectively, is a problem of interest, the study of which may further clinico-anatomical correlation.

X. In many cases of focal symptoms in general paralysis the examination of the brain reveals no adequate cause for the focal symptoms; this should warn one against being satisfied with the crude correlation of the lesions, which we do find in other cases, with the clinical symptoms, seeing that the latter may sometimes be found in the absence of such lesions.

A SUMMARY REVIEW OF THE SYPHILITIC AND METASYPHILITIC CASES IN 152 CONSECUTIVE AUTOPSIES.

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During the past fifteen months 152 autopsies have been performed; in 52 or about 34 per cent of the cases, syphilitic or metasyphilitic changes were found in the central nervous system. A summary review of this material has been made with special reference:

- (a) To the relative frequency of syphilis and metasyphilis (general paralysis) in this autopsy series;
- (b) To the criteria used in the histopathological differential diagnosis between the two processes;
- (c) To the relation between and possible continuity and coincidence of the two conditions;
- (d) To a comparison of the cytological and serological findings as determined by the original Wassermann method and Noguchi modification with respect to the histopathological diagnosis;
- (e) To certain atypical and rather unique cases and;
- (f) To certain rather unusual and usual mistakable conditions.

(a) *The relative frequency of the two conditions.* Thirteen cases of syphilis and thirty-nine cases of general paralysis as such were found but in about one-quarter to one-fifth of the latter cases (studies as yet incomplete) evidences of a previous or contemporaneous syphilitic process were found. In one case an apparently co-existent syphilitic endarteritis was associated with a chronic diffuse meningoencephalitis but more often the endarteritis present appears as a regressive or quiescent process, apparently a residual of a past or passing syphilitic reaction. The serological findings in this class of cases, so far as known, has not been adequately determined; a routine serial cyto- and serological examina-

tion and comparison with the autopsy findings will possibly reveal the ultimate significance of such combination forms; mixed and irregular reactions would not be surprising.

(b) *The criteria used in a histopathological diagnosis between the two processes.* In an attempt to state and estimate the significant features necessary in making a differential histopathological diagnosis between the syphilitic and meta-syphilitic processes, it is convenient to make the following groups and subgroups as representing the main types and relations of the one to the other; however, intergrading and combination forms occur.

Cerebral Syphilis	{	Gummatous type.
		Meningitic varieties.
		Endarteritic-meningitic forms.
		Endarteritis-meningitis with tabes.
		? Endarteritis with meningoencephalitis.
Metasyphilis (G. P.)	{	Tabes with meningoencephalitis.
		Diffuse meningoencephalitis.
		Diffuse meningoencephalitis with
		focal lesions.

1. *The focal or gummatous variety* with solitary or multiple granulomata develops about the pial or larger cerebral vessels; usually a varying degree of local meningitis and endarteritis is also present. Depending upon the location and extent of the process a clinical syndrome, essentially comparable to that of a brain tumor may occur with this form. This class of cases is relatively infrequent; one of the thirteen cases was such.

2. In the *diffuse, subacute meningitic type* the process involves often wide, topical areas as the superior convexity of one, or both hemispheres, the base, brain stem and cord or possibly individual lobes of the brain, giving rise to irritative, paralytic and defect symptoms, usually with a conspicuous tendency to multiple isolated sensory-motor palsies and an organic mental reaction of both a chronic and acute type. One of the thirteen cases was of this type. Aut. 863, E. P., was a woman of 49, no anamnesis. Irregular, unequal, sluggish pupils, paralysis of the left third and fourth nerves, bilateral exophthalmos, tremor of face and

hands, marked speech defect, left hemiatrophy of the tongue, unequal, exaggerated knee-jerks, Babinski sign on left, ataxic gait, tenderness over the larger nerve trunks, spinal pleocytosis 127 cells per c. mm., positive reaction in the blood, negative in the spinal fluid, were observed. There was general impairment of mentality with defective orientation, retention and grasp and poor memory for both remote and recent past; an optimistic mood, no delusions. Convulsions preceded death. Histopathologically, a diffuse high grade infiltration of the pia, often with the development of miliary gummata and high grade exudative endarteritis, all of an apparently rapid, progressive character was present. These cases also appear relatively infrequently in the State hospitals and are among those probably most amenable to specific treatment and serological examinations are probably the most valuable in directing treatment in this class of cases.

3. In the *chronic endarteritic forms* of cerebral syphilis the vessels are perhaps most significantly involved and show a concentric, girdling syphilitic endarteritis and periarteritis of a varying degree of intensity; in addition a slight, low grade, relatively wide spread chronic meningitis is present, usually least pronounced over the convexity, most demonstrable over the base of the brain, brain stem and cord. Judging from the clinical course, the onset of which may be relatively abrupt, this class of cases represent in part improved, subacute conditions, but in the majority of cases the onset and course is slowly or episodically progressive, and the dominant trend of both the physical and mental symptom complex is of a cardio-vascular-cerebral arteriosclerotic character. In addition often vivid hallucinations and irritative phenomena as twitchings and convulsions are present and the clinical picture may often closely simulate general paralysis. What relation these latter symptoms bear to the arteriosclerotic process *per se* and what to the low grade chronic meningitis present is not clear, but the prominence of these symptoms in these cases would seem to emphasize the anatomical differences between the *luetie* and *general* type of cerebral arteriosclerosis. This chronic

endarteritic-meningitis group possesses a rather special interest, because it is at once directly related to cerebral syphilis on the one hand and general paralysis on the other especially the stationary type of cases or those of long duration in which connection Dr. C. B. Dunlap has discussed this class of cases.

In the slowly progressive or stationary forms of general paralysis which are relatively infrequent—one of the 39 cases—a few lymphoid cells and an occasional plasma cell, more often mast cells, are seen in the pia and cortical vessels. The comparability to the chronic syphilitic endarteritic-meningitic findings suggest an intimate relationship, if not continuity of the two processes. Bearing on the question of the syphilitic-metasyphilitic process and possible transition of the one condition into the other, consecutive cytological and serological examinations of the spinal fluid and blood at three or six month intervals, especially in clinically problematical cases and cases of long duration might reveal interesting data as to the life history of the two processes when compared histopathologically at autopsy.

Another point of contact, between the syphilitic and metasyphilitic processes, is the chronic endarteritis and meningitis accompanying tabes. In eight of eleven cases studied, and in four of six included in this autopsy series, the anatomical changes present in the brain were not those of general paralysis but of the chronic syphilitic endarteritic-meningitic type. Moreover the psychoses in these cases partook largely of the nature of a depression with hallucinations and in general the patients were without any special mental defect symptoms, therefore quite unlike general paralysis. In one of these cases, relatively early, in which a typical, tabetic clinical complex was present but no obvious psychosis, in addition to a typical tabetic degeneration in the posterior columns of the cord, a low grade, frank, miliary syphilitic pachymeningitis and lepto-meningitis, cranial and spinal nerve radicular neuritis was present. These cases, and this last case in particular are cited to illustrate the approximation, coexistence and possible continuity of the syphilitic and metasyphilitic conditions pre-

suming the tabetic degeneration to belong to this latter group. These chronic syphilitic endarteritic-meningitic findings in a relatively large number of the tabetic cases, with psychoses in the nature of a depression with hallucinatory episodes and without the more characteristic features of general paralysis, may possibly explain in part the irregular serological findings as well as the high percentage of positive serum and negative fluid reactions in tabetics. Taking Kaplan's figures for his "positive Wassermann series in tabetics"; of 42 cases 34 were positive in the serum and 8 negative, while 32 were negative in the spinal fluid and 10 positive. Serological examinations in our small series is incomplete. It appears to be a direction in which consecutive cyto- and serological examinations and critical histopathological studies might profitably work. Further controlled by careful clinical and histopathological studies it might be possible to shed further light on the evolution of the syphilitic-tabetic metasyphilitic processes *c. g.* by making a serial study of the spinal fluid and observing whether the reaction may swing from a constant negative to a positive.

Still another point of contact between the syphilitic and metasyphilitic condition exists in the combination forms, especially those in which both processes apparently active, coexist; these cases are relatively infrequent, occurring once in the thirty-nine cases. In this case, a high grade exudative endarteritis of the cerebral arteries in addition to a well marked chronic diffuse meningoencephalitis was present. In about one-fifth of the thirty-nine cases of general paralysis a quiescent syphilitic endarteritis was found and persistent evidently as a cicatrix in the post-syphilitic period. A tabular summary of the cyto- and serological findings with the anatomical diagnosis in all cases is here given. Dr. Karpas of the hospital staff with the co-operation of Drs. Kaplan and Casamajor of the New York Neurological Institute performed the cyto- and serological works for the Wassermann series, while Dr. Henderson did it for the Wassermann-Noguchi modification.

CASES OF CEREBROSPINAL SYPHILIS.

<i>No.</i>	<i>Name.</i>	<i>Anatomical Diag.</i>	<i>Cells.</i>	<i>Fluid.</i>	<i>Blood.</i>
847	F. P.	Gummata.	52	—	+
863	E. P.	Subacute Meningitis.	120	—	+
927	M. W.	Chronic Endarteritis Meningitis.	—	—	—
788	K. J.	“	0	0	0
801	M. K.	“	0	0	0
826	J. D.	“	0	0	0
918	J. C.	“	0	0	0
854	E. K.	“	0	0	0
856	A. S.	“	0	0	0
895	S. B.	“	0	0	0
799	F. McD.	Syphilitic Endarteritis, Gen. Par.	0	0	0
916	S. D.	Syphilis and Gen. Par.	0	0	0

WASSERMANN-NOGUCHI MODIFICATION.

<i>No.</i>	<i>Name.</i>	<i>Cells.</i>	<i>Fluid.</i>	<i>Blood.</i>	<i>Anatomical Diag.</i>
803	J. D.	+	0	0	Tabes with Chronic Endarteritis Meningitis.
833	J. McD.	8	—	+	Chronic End.-meningitis.
931	J. Mc.	+	—	+	“ “
929	P. D.	+	+	+	“ “
941	J. P.	0	+	+	Tabes, Chronic End.-meningitis.

CASES OF TABES WITH (a) CEREBROSPINAL SYPHILIS
AND (b) GERERAL PARALYSIS.

<i>No.</i>	<i>Name.</i>	<i>Cells.</i>	<i>Fluid.</i>	<i>Blood.</i>	<i>Anatomical Diag.</i>
803	J. D.	+	0	0	Tabes with Cerebral Syphilis.
950	G. V.	0	0	0	Tabes and General Paralysis.
858	S. J.	+	+	+	Tabes and General Paralysis.
918	J. C.	0	0	0	Tabes with Cerebral Syphilis.
929	P. D.	+	+	+	Tabes with Cerebral Syphilis.
941	J. P.	0	+	+	

CONCERNING THE CASES OF GENERAL PARALYSIS. In thirty-nine of the fifty-two cases, the anatomical findings were characteristic for general paralysis. In thirty-three the clinical and anatomical diagnoses were in agreement; in six cases in which general paralysis was believed to be improbable, the microscopic findings were characteristic

but in the majority of these the pathological process showed a focal, and rather unusual distribution. In eight cases in which general paralysis was considered most probable, other cerebral lesions than general paralysis were found but in only one case not suspected of being general paralysis was such found at autopsy; in eight cases, focal, atrophic, or vascular lesions were present; in five cases other cerebral lesions in addition to a diffuse meningoencephalitis were present, among which may be mentioned traumatic injuries, acute purulent meningitis and arteriosclerosis; in two of six cases as cited, a tabetic process of the spinal cord was present in addition to a diffuse meningoencephalitis in all respects characteristic for general paralysis; in four of the six tabetic cases a chronic syphilitic meningitis and endarteritis was found.

Aside from special or extraneous features, the cases of general paralysis may be divided into (1) the cerebral type with apparent symmetrical hemisphere involvement and (2) the cerebral type with asymmetrical involvement with (a) atrophy or (b) softenings. The former group constitutes the majority of the cases, thirty-one of the thirty-nine. These cases were not especially remarkable except as already referred to in the preliminary analysis of the entire group. But eight of the thirty-nine cases or almost 20 per cent were of the focal type, a relatively higher per cent than might be suspected; in only one was the focal lesion attributable to a vascular occlusion *per se*. Special interest attaches to these cases largely because of the atypical distribution of the process, involving as it did mainly a hemisphere, lobe or topical area. Associated focal defect symptoms often obscured the picture, in the background of which but depending apparently on the distribution and intensity of the process, either the mentality or personality or both showed atypical feature. A brief reference to several of these cases may be of interest.

Atypical Cases of General Paralysis. In one instance (Aut. 875) the right hemisphere was extremely atrophic in all its parts (spastic left hemiplegia and left hemianopsia); the left hemisphere was intact with almost normal pia, convolutions and cortex. The degree of preservation of men-

tality, at least memory, retention and grasp and essential elements of the patient's personality was little short of remarkable and appeared to stand in gross correlation with the integrity of the leading hemisphere. Compare and contrast with this case another, Aut. 853. F. W. was a man of 41, syphilis at 34, a right hemiplegic stroke at 35; in a depression committed at 39 when he showed residuals of a right hemiplegia, spinal pleocytosis, positive Wassermann in blood and spinal fluid but no grossly apparent mental defect symptoms and was soon discharged. Shortly afterward, after a series of convulsions he showed a memory disorder and a tremendous retention defect with which there was striking preservation of his personality, and absence of general mental dilapidation. The brain showed an atypical distribution of the meningoencephalitic process, it being almost entirely absent from the predelection zone in the frontal region and of a most intense degree in the left temporo-parietal field which localization probably explains in large part the atypical clinical picture.

Mistakable conditions for General Paralysis. Among the conditions mistakable for general paralysis was a case clinically very similar to the last one. Aut. 928, M. C., was a woman of 56; there was a history of moderate alcoholism and two severe traumata at 52; at 54 a twenty-four hour period of amnesia and since then a gradual loss of memory and for almost a year preceding death patient possessed very little memory for both remote and recent past and showed a marked retention defect and talked in a rambling disconnected manner and fabricated freely; her attitude was comparatively normal with fair insight and there was little gross deterioration of her personality. She was depressed, wondered if she would ever get well, complained of difficulty in thinking, of headache and dizziness; her pupils were normal, speech slightly slurring, writing tremulous with omissions; knee-jerks exaggerated, slight ataxia, no paralyses; herpes zoster in the fifth, sixth and seventh intercostal spaces; spinal pleocytosis, Wassermann positive in blood serum and spinal fluid. Death in convulsions one week after a left-sided stroke. The case was unclear, several possibilities were considered. An atypical

distribution of a general paralytic process comparable to case 853; or a depressed fracture in the left parieto-temporal region or a Korsakoff syndrome or senile confabulatory state. The significance of the Wassermann reactions and spinal pleocytosis seemed lessened by the presence of the herpes zoster. At autopsy a recent subdural blood clot into an old organizing hemorrhagic pachymeningitis membrane was found compressing the left hemisphere. The subjacent pia showed a local reaction and contained lymphoid and endotheloid cells; the cortical vessels were free; the cortex itself contained numerous senile plaques and showed a neuroglia reaction and high grade degenerative changes. While the lesions were genetically different in 853 and 928 the anatomical defects and clinical features merit comparison.

The following are tabular summaries of the cytological and serological findings by the original Wassermann methods and Noguchi modification; all cases examined are included and the results are equally consistent for both methods except cases 875 and 928, which are unclear.

ORIGINAL WASSERMANN.

<i>No.</i>	<i>Name.</i>	<i>Cells.</i>	<i>Fluid.</i>	<i>Blood.</i>	<i>Anatomical Diag.</i>
787	A. S.	+	+	+	G. P.
822	G. S.	+	+	+	G. P.
881	E. D.	+	+	+	G. P. Focal.
897	R. L.	+	+	+	G. P.
901	G. W.	+	+	+	G. P.
906	S. B.	+	+	+	G. P.
928	M. C.	+	+	+	Herpes Zoster, Trauma, Senile, Alcohol.

WASSERMANN (NOGUCHI).

<i>No.</i>	<i>Name.</i>	<i>Cells.</i>	<i>Fluid.</i>	<i>Blood.</i>	<i>Anatomical Diag.</i>
798	E. M.	+	+	+	G. P.
835	A. P.	+	+	+	G. P.
853	F. V.	+	+	+	G. P. Focal.
858	S. J.	+	+	+	G. P. Tabes.
869	J. Mc.	+	+	+	G. P.
875	J. G.	+	—	+	G. P. Focal.
879	R. P.	+	+	+	G. P. Focal.
898	J. B.	+	+	+	G. P.
909	J. Mc.	+	+	+	G. P. Focal.
925	R. K.	+	+	+	G. P.
926	E. S.	+	+	+	G. P.
932	E. T.	+	+	+	G. P.

In conjunction with the last case cited as a mistakable condition for general paralysis (1) the precocious forms of senile dementia, presenile dementia or Alzheimer's disease and cerebral arteriosclerosis should be mentioned. Presenile dementia is an essential dementia developing in the late thirties or early forties or fifties and usually progressing rapidly to a profound dementia. Indefinite focal symptoms may be present as aphasic, paraphasic, hemi-

anopsic and apraxic disorders either on the ground of a grave dementia or occasionally as a result of focal atrophies. Physically, the pupils may be sluggish to light and accommodation, there are usually present, tremors of the body, a striking gibberish, syllabic paraphasic speech; tremulous perseveration in writing and exaggerated tendon reflexes. Anatomically, there is a high grade symmetrical brain atrophy, sometimes focal atrophy and this without any demonstrable degree of arteriosclerosis. The pia and cortical vessels are negative. The cortex especially and the lower nerve cell areas to a less extent show an extreme degree of nerve cell degeneration with basket cell formations and production of senile plaques, also an associated neuroglia reaction.

Among the other more common conditions simulating general paralysis met with were the lacunar cases of arteriosclerosis with multiple small focal medullary softenings in the white substance of the brain; these giving rise to isolated irritative and paralytic symptoms and associated mental enfeeblement of a progressive and profound character. Case 876 was an example of this disorder. He was a porter of 44, admitted gonorrhea but denied syphilis. He had complained of dizzy spells since 29. Onset of psychosis at 41 with random talking, thick speech and marked vertigo, and six months later a paralytic stroke. On admission at 42, he was moderately elated but not megalomaniac; there was marked mental enfeeblement. The pupils were sluggish, speech thick and slurring; knee-jerks exaggerated; tremor of facial muscles and hands, inability to write; negative lymphocytosis, negative Wassermann reactions in serum and fluid. The brain was negative for meningoencephalitis but numerous small arteriosclerotic focal softenings were found in the marrow of the forebrain, brain stem and cerebellum. The cyto- and serological findings in this latter group of cases is as follows, negative in all:

<i>No.</i>	<i>Name.</i>	<i>Cells.</i>	<i>Fluid.</i>	<i>Serum.</i>	<i>Clinical D.</i>
872	M. B.	—	—	—	Pseudo-bulbar Paralysis.
876	H. P.	—	—	—	General Paralysis.
837	J. C.	—	—	—	Pseudo-bulbar Paralysis.

SUMMARY.

1. Cerebral syphilis and metasyphilitic conditions constituted about 34 per cent of all the cases coming to autopsy.

2. The chronic endarteritic-meningitic forms of cerebral syphilis are relatively the most common, occurring in fifteen of seventeen cases, including four of the tabetic cases with chronic syphilitic meningitis.

3. In three only of the cases of cerebro-spinal syphilis were the cyto- and serological findings obtained; in two consistent, in one a fairly obvious error.

4. Serological studies in this group might very well prove of diagnostic value, if reasonably consistent results were returned, but probably would be of little directive value for therapeutic purposes, because of the marked chronicity of the process and the physical defect conditions are irremediable.

5. The serological findings when finally unified and considered with the clinical context, may prove of considerable statistical value in default of autopsies, but from a therapeutic standpoint in these chronic cases, which form the bulk of our State hospital material is probably essentially negligible.

6. Histopathological studies suggest a close relationship between certain forms of syphilis and metasyphilis evidenced in

- (a) the chronic syphilitic endarteritis-meningitis and low grade metasyphilitic processes.
- (b) the chronic syphilitic meningitis accompanying tabes.

(c) the rare, but apparently coexistent forms of exudative syphilitic endarteritis and meningoencephalitis.

7. Consecutive cyto- and serological studies in the chronic syphilitic, tabetic and early and late metasyphilitic conditions with reference to the life history of the syphilitic metasyphilitic disorders, might shed some light on the evolution of these disorders and nature and constancy of the serological reactions.

8. The cyto- and serological findings, the latter by the original Wassermann and Noguchi modification, were uniformly and equally consistent in eighteen cases; in one case, probably inconsistent.

9. In three cases of general arteriosclerosis, one of which was considered general paralysis, negative cyto- and serological findings were returned.

10. The relatively large number (20 per cent) of focal cases and those of an atrophic, rather than occlusive vascular character, is of interest with reference to the atypical general paralytic features presented and their clinical comparability to the endarteritic forms of cerebral syphilis.

11. The conditions simulating cerebral syphilis and general paralysis as: presenile dementia, certain cases of alcoholism, of trauma and arteriosclerosis, especially the cases of the medullary lacunar type are of interest and importance in the matter of a differential diagnosis.

THE CLINICAL INTERPRETATIONS OF THE SERO-
LOGICAL CONTENT OF THE BLOOD AND
CEREBROSPINAL FLUID, WITH SOME
REFERENCE TO CYTOLOGY AND
CHEMISTRY OF THE LATTER,
IN MENTAL DISEASES.

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INTRODUCTION.

In the study of the interpretation of clinical phenomena, the laboratory forms an important adjuvant. In the pre-Wassermann period cytological and chemical examination of the cerebrospinal fluid aided us in understanding certain types of organic reaction and in making finer differentiations. Recent researches in serology have furthered our knowledge of clinical forms of organic psychoses and obscure nervous affections. The invaluable studies of Plaut, Nonne, Holzman, Marie and scores of others have thrown much light on modern psychiatry and neurology. Space does not permit us to review exhaustively the literature on the subject.

In this communication, the writer desires to set forth the results of his investigations which were undertaken during the year of 1911 in conjunction with Dr. D. N. Kaplan and Dr. L. Casamajor of the New York Neurological Institute, New York City. The laboratory work was done in the New York Neurological Institute by Drs. Kaplan and Casamajor. Brief reference only to the technique of the Wassermann reaction and the method of the chemical and cytological examination can be made here, and for more complete knowledge of the subject, the reader is referred to the original communication of Dr. Kaplan and Dr. Casamajor, which is published in *Archives of Internal Medicine*.

The following methods were employed:

THE WASSERMANN REACTION.

The original Wassermann technique was used, plus the Landsteiner modification. The dose of cerebrospinal fluid was 0.5 cubic centimeters. The controls were known positive and negative sera, amboceptor efficiency, antigenic interference and auto-inhibition. Standardization was performed on the day of the testing of the sera. Only unequivocal positive results were considered. However, weakly positive, nearly positive or almost complete inhibition were not included among the positive results, but were regarded as negative.

THE SPINAL FLUID.

The cells were counted by the Fuchs-Rosenthal method. In view of the fact that some fluids contain substances which are capable of digesting cells, it is necessary to count the cells on the same day they are obtained; in some of our cases the fluids were examined twenty-four or forty-eight hours later—the fluids were kept in the refrigerator. To determine the globulin content, Kaplan's method was employed. This consists in using gradually diminishing quantities of cerebrospinal fluid from 0.5 cubic centimeters to 0.1 cubic centimeter, increasing the smaller quantities to 0.5 cubic centimeters with distilled water. The tubes are heated to boiling and three drops of a five per cent solution of butyric acid added. To this is added 0.5 cubic centimeters of a saturated solution of ammonium sulphate, allowing the solution to flow under the spinal fluid very gently by holding the tube almost horizontal. The diameter of the tubes used is one centimeter. When the globulin is excessive in amount, a ring is obtained in the various tubes. If this be very great, it may be obtained in the tube containing but 0.1 cubic centimeter of fluid with 0.4 cubic centimeter of water. For instance, where this excess is not very marked, the ring is not obtainable with the diluted fluid. The ring is usually seen twenty minutes after the addition of the ammonium sulphate, and only those

tubes are considered as containing an excess of globulin that show a thick granular ring.

The reliability of the technique can not be questioned, although mistakes in the course of laboratory process are liable to occur and at times are unavoidable.

The writer's part in these investigations was purely clinical; he was responsible for the selection of the clinical material and for the diagnostic classification and correlation of the clinical findings with the laboratory results. Three hundred cases were available for our investigations. However, only two hundred twenty-two cases were selected for our studies. We were forced to eliminate certain cases in which the diagnoses were not very clear.

We may divide our material into two main groups: first a group of cases in which the laboratory findings show specific pathological phenomena, and a second group in which the laboratory findings show no abnormalities. The first group includes general paralysis, cerebrospinal syphilis, and tabes. The second group consists of organic psychoses of a non-luetic nature, toxic psychoses, epileptic psychoses, and functional psychoses.

FIRST GROUP.

A. *General Paralysis.*

According to many investigators, serological, chemical and cytological findings in general paralysis are of definite value. The Wassermann reaction is especially of great interest. It is maintained by many that in all cases of general paralysis, both the blood and fluid show complement deviation. However, in the literature, the results of different investigators differ. Plaut, in a very recent communication, compiled the statistics of the various investigators, but accepted only those which were free from criticism, as far as the method and technique of the Wassermann were concerned. He collected seven hundred ninety-three sera and eight hundred fifty-four cerebrospinal fluids of general paralytics; ninety-two per cent of the sera and eighty-nine per cent of the fluids gave a positive

reaction. The serum reacts with greater regularity than the fluid and these observations have been substantiated by more recent workers, especially by Boas and Neve of Copenhagen. The French investigators claim that the serum in paretics reacts less positively than the fluid; but Plaut maintains that in such cases the error should be attributed to laboratory technique. In Plaut's experience, a negative serum reaction in paresis is very rare; of three hundred twenty cases, only two were negative. Edel's, Nonne-Holzmann's, Bendixsohn's, Kafka's, Donath's, Marinesco's, and Boas and Neve's records, reveal one hundred per cent of complement deviation in general paralysis. Only nine of Plaut's two hundred seventy-six cases of paresis, gave a negative Wassermann reaction of spinal fluid, and in one of them, the serum showed a negative reaction. According to the French observers, the Wassermann reaction bears some relation to the course of general paralysis. In the early stages, the serum is usually positive; in the fully developed stage, both serum and fluid are positive, and in the last stages of the disease the fluid alone gives a positive reaction. Plaut does not adhere to this view and he declares most emphatically that in the incipient stage of general paralysis both the cerebrospinal fluid and serum show complement deviation and, doubtless, this phenomenon can be observed before the clinical symptoms become fully developed. According to his experience, should the reaction be weak in the early stages of paresis, it remains so *usque ad finem*. Many observations tend to show that a weak complement deviation is suggestive of a remission or a stationary course of the disease.

Such observers as Alt, Eichelberg and Pfortner and Kafka, saw a positive Wassermann reaction in the fluid, but not in the serum. The following table will show the results of the various observers:

GENERAL PARALYSIS.

	POSITIVE		NEGATIVE	
	Liquid	Blood	Liquid	Blood
Zalociecki	8	42	4	2
Smith-Candler	59	—	5	—
Bendixsohn	8	14	1	0
Eichelberg-Pfortner	16	14	0	2
Kafka	52	8	6	3
Rossi	15	15	0	0
Nonne-Holzmann	22	23	1	0
Edel-Lesser	—	64	—	1
Donath	—	17	—	0
Hohne	—	24	—	6
Marinesco	32	35	3	0
Plant	64	89	1	0

We had one hundred cases of general paralysis; seventy-two were fully developed and the diagnosis was undoubted; twenty-two cases of general paralysis in the last state; and in six cases the diagnosis was unquestionable, but nevertheless the laboratory findings presented paradoxical results.

a. *Seventy-two full-developed cases of general paralysis.*

Forty-nine of the seventy-two cases showed a positive Wassermann reaction in the blood and fluid. Globulin excess was also demonstrable in all of them. In all instances, except one, lymphocytosis was present. In that case there were only three lymphocytes per cubic millimeter. In some cases, lymphocytosis was as high as two hundred forty-eight, one hundred twenty-six, and one hundred five per cubic millimeter. The average cell-count was forty lymphocytes per cubic millimeter. In five cases polynuclear leucocytes were observed; the number varied between three and twelve. Of these forty-nine cases, forty-four were cerebral form, three tabetic and two mixed form.

It is extremely interesting to note that in only twelve cases a positive history of syphilis was obtained; in twenty-two cases the history was suspicious, and in fifteen cases luetic infection was denied.

In seven cases the Wassermann test was positive in the blood but negative in the fluid; one of these cases was re-examined and no complement deviation was observed in either the blood or fluid. In all cases, except two, globulin was increased. Lymphocytosis was demonstrated in six out of seven cases. In the negative Wassermann case globulin was also absent, and it is important to note that the patient was treated with salvarsan shortly before the examination of the blood and fluid. The lymphocytes varied between fifteen and one hundred nine per cubic millimeter, the average being forty. In one case only four polynuclear leucocytes were recorded.

Of these seven patients a history of syphilis was elicited in four; in two, syphilis was suspected; and in two, no luetic infection could be determined. Five cases were cerebral form, two tabetic form of paresis.

In four cases the Wassermann test was positive in the fluid, but the blood was not examined. Globulin and lymphocytosis were found in all of them, the average cell count being thirty-two lymphocytes per cubic millimeter. In one instance only, plasma cells were seen. In one case there was a positive history of syphilis, in two suspected, and in one, negative. All of these cases were of the cerebral type.

In nine cases the Wassermann test was negative in the blood and positive in the fluid; in one case, globulin was weakly positive, and in another, globulin was not obtained; in the remaining seven cases, globulin was present. The lymphocytes ranged between fifteen and eighty-one per cubic millimeter, averaging about forty-one; in two cases plasma cells were found, and in one instance polynuclear leucocytes were in evidence. In six cases a history of syphilis was obtained, in three it was suspected and one denied. All of them were of the cerebral type.

In three cases the Wassermann reaction was not elicited in the fluid or serum; one of these patients was re-examined and at this time Wassermann test was negative in the serum, but positive in the fluid. In two cases only the globulin was negative. The cells varied between thirteen and eighty-

eight per cubic milimeter, the average being forty-three. In all these cases certain history of syphilis could not be obtained. These cases were of the cerebral type.

b. *Twenty-two cases of general paralysis in the last stage.*

In fourteen out of the twenty-two cases a positive reaction in the blood and fluid was determined, and a globulin increase was present. The lymphocytes varied between twelve and one hundred fifty-eight cells per cubic milimeter, the average being fifty-seven. In four cases polynuclear leucocytes were observed, ranging from one to forty-five per cubic milimeter.

Only three patients admitted syphilis; in five a history of syphilis was not obtained, and in six there was a suspicion of luetic infection. Thirteen were of the cerebral and one of the tabetic type.

One case showed a negative Wassermann in the blood and fluid and globulin was not in excess; a second specimen of the fluid and blood was obtained and the results were again negative. In this particular case the first cell-count was three and the second was twenty-three lymphocytes per cubic milimeter. The case is no doubt one of general paralysis, although a history of syphilis could not be satisfactorily established. This case was of the cerebral type of paresis.

In seven cases the Wassermann test was negative in the serum and positive in the blood. One of these patients was re-examined and similar results were obtained. The cell-count varied between five and forty-nine, averaging about twenty-one. In four cases there was a history of syphilis; in two, syphilis was probable, and in one denied. Five cases were of the cerebral and two of the tabetic type of paresis.

c. *Cases in which the diagnosis of paresis is undoubted; however laboratory findings did not support the clinical diagnosis.*

We had seven cases of general paralysis in which the diagnosis could not be questioned; nevertheless, the lab-

oratory report was atypical, but by reason of the fact that the clinical phenomena were well defined, the diagnosis of general paralysis was retained in spite of the negative laboratory findings. It will not be amiss to give a brief outline of these cases:

CASE NO. 1. A. S. Admitted December 7, 1910. Age 50, male, white, married. History of syphilis not obtained. Physically, patient shows irregular pupils, which did not react to light; tremor of tongue and fingers; over-active knee-jerks; ataxic gait and station; writing and speech defect.

The mental status: Slow development, progressive and gradual mental decline; at present, patient shows marked dementia; his speech is so defective that he is unable to co-operate with the examiner. He usually lies in bed, wets and soils himself, and leads a vegetative existence. The findings were as follows:

	FIRST REPORT.	SECOND REPORT.	THIRD REPORT.
Serum	Negative.	Negative.	Negative.
Fluid.....	Negative.	Positive.	Negative.
Globulin.....	Negative.	Positive.	Negative.
Cells	Five.	Nine.	Five.

CASE NO. 2, with autopsy. R. L. Admitted June 15, 1911. Age 58, American, male, white. No history of syphilis; chronic alcoholic. The development of the psychosis was not well determined; probably of about one year's duration.

When admitted to this hospital, physical examination showed unequal and slightly irregular pupils, which reacted sluggishly to light, active knee-jerks, coarse tremor of both hands, slight slurring speech and some writing defect.

Mentally, the patient was euphoric, gave expression to a few grandiose ideas, declared he had sixty million dollars; was rather boastful in his demeanor; he was poorly oriented and gave a very poor account of himself; retention was defective.

His mental dilapidation was gradual and progressive and he died August 15, 1911. Autopsy showed the usual histologic picture of general paralysis.

	FIRST REPORT.	SECOND REPORT.
Serum.....	Negative.	Positive.
Fluid	Negative.	Positive.
Globulin.....	Negative.	Positive.
Cells	Seven.	Twenty-eight.

CASE NO. 3. C. S. Admitted December 23, 1910. Age 57, German, married, history of syphilis, habits moderate, laborer.

For about three or four years prior to his admission to the hospital,

patient had trouble with his gait and was forced to walk backwards while ascending stairs. He complained of shooting pains in his back and legs; at this time he expressed ideas of grandeur. For the past year he did odd jobs and could not hold regular positions. His conduct was erratic and his memory was considered poor. Shortly before his commitment, he had convulsions.

Here physical examination showed sluggish pupillary reaction; some deafness; ataxic gait; ataxic station; coarse tremors of facial muscles and fingers.

Mentally, patient was rather dull, inclined to be irritable; had ideas of jealousy; was fairly well oriented; his retention was poor and likewise his memory was not good.

At the present time patient is quiet, manifests no interest in the general affairs of life, usually remains seated in one place, and only at times will he do a little light work. He is oriented, gives an account of himself, and few date discrepancies are elicited, which are not very grave. He wears a mask-like expression. He states that he is not insane and attributes his trouble to his wife, and accuses her of being untrue to him.

Physical condition at present: Unequal pupils which are irregular in outline and react to light sluggishly, especially the right one; knee-jerks are over-active; Achilles reflex is present; there is no Romberg; there are no tremors; no apparent writing defect or speech defect; no incontinence of urine.

	FIRST REPORT.	SECOND REPORT.	THIRD REPORT.
Serum.....	Negative.	Negative.	Positive.
Fluid.....	Negative.	Negative.	Positive.
Globulin.....	Negative.	Negative.	Positive.
Cells.....	0	Five.	Eight.

CASE NO. 4. C. H. Admitted May 15, 1911. Age 54, Austrian, male, white, waiter, single. History of syphilis not determined.

Physically, he showed the following: Irregular small pupils which did not react to light; absent knee and Achilles jerks; coarse tremor of both hands; slurring speech and markedly defective writing; gait and station ataxic.

The mental picture is one of marked dilapidation with very grave memory, retention and orientation defect. At one time he had a few grandiose ideas and in the early beginning of the disease his mood was one of exaltation.

	FIRST REPORT.	SECOND REPORT.	THIRD REPORT.	FOURTH REPORT.
Serum.....	Negative.	Negative.	Positive	Positive.
Fluid.....	Negative.	Suspicious.	Positive.	Positive.
Globulin...	Negative.	Negative.	Positive.	Positive.
Cells	Five.	Twenty-one.	Five.	Eleven.

CASE NO. 5. J. E. Admitted April 23, 1910. Age 48, Ireland, history of syphilis, alcoholic, married, gradual onset with peculiar behavior and defective memory.

Physical condition: Ataxic gait and station; slurring and ataxic speech; small pupils which do not react to light; over-active knee-jerks; writing defect and speech defect.

Mentally, patient shows marked dementia without trends; he is unable to give an account of himself because his speech is so markedly defective and also because he is so demented.

	FIRST REPORT.	SECOND REPORT.	THIRD REPORT.
Serum.....	Negative.	Negative.	Negative.
Fluid.....	Negative.	Negative.	Negative.
Globulin.....	Negative.	Negative.	Negative.
Cells.....	Fourteen.	Four.	Three.

CASE NO. 6. J. M. Admitted September 22, 1910. Age 44, married, syphilis not determined, temperate.

About seven months prior to admission he became paralyzed in both legs, and at the same time began to have dizzy spells and headaches. Soon paralysis disappeared, but he had difficulty in descending the stairs. However, off and on, he would get an attack of paralysis. Three weeks before commitment he began to worry, thought his wife would leave him, and attempted suicide. He grew restless and excited, and had to be committed.

In the hospital, physical examination revealed irregular, unequal pupils, with a limited range of light reaction; deep reflexes exaggerated, especially the knee-jerks, which were unequal; tremors of both hands, tongue and, at times, facial muscles; speech and writing defect; gait and station ataxic; Wassermann in the blood and serum negative; globulin negative, three lymphocytes per cubic milimeter.

Another extremely interesting case came under our observation which at one time was regarded as one of general paralysis, although the laboratory findings were negative; however, autopsy showed that it was a case of arteriosclerosis, not of syphilitic genesis.

Patient was admitted to the hospital June 10, 1909. Age 42, American, Negro, janitor, married, habits moderate.

It was said that the patient had dizzy spells since the age of 27. About eighteen months prior to his admission to the hospital he became dizzy and talked at random. His speech was thick and it was thought that he had at that time a paralytic stroke. Soon he improved and was able to attend to his work. In the early part of June, 1909, he became again unconscious and was unable to use his body. On the fourth day he became excited, talked incoherently, and was then sent to the hospital.

Upon admission here, physically he showed exaggerated deep reflexes, sluggish pupillary reaction, scars of old ulcers on legs, and some speech defect.

Mentally he was elated, poorly oriented, at times his answers were irrelevant; he gave a very poor account of himself and his memory, both for remote and recent past, was very poor. In general he appeared rather sluggish in comprehending questions, and indeed at times he could not understand the meaning of a simple question. Soon after his admission he became more quiet and was better oriented, but the intellectual defects stood out prominently in the foreground.

After some residence in this hospital the patient was discharged on contract with a diagnosis of general paralysis.

March 22, 1911, he was readmitted, and at that time examination showed coarse tremor of facial muscles and fingers, exaggerated kneejerks, marked arteriosclerosis, and pupils of a doubtful reaction.

Mentally, the patient was dull, but rather euphoric. His replies were not to the point, and he was mentally deteriorated, which was evidenced in memory and judgment. His speech was slurring and sticking. He was unable to write his name and only made a few illegible scrawls. June 8, 1911, he died.

It is very important to note that in this case Wassermann test was negative in the blood and fluid; there was no globulin. Unfortunately, the fluid was contaminated with blood, but in spite of that no lymphocytes were demonstrable; there were one hundred twelve red cells per cubic millimeter.

Autopsy in this case showed no evidence of paresis. The histologic picture was one of arteriosclerosis of a non-luetic origin.

B. *Cerebrospinal Syphilis.*

Plaut was the first one to call attention to the fact that in cerebrospinal syphilis, irrespective of the pathological process—meningitic, gummatous, or endarteritic form—the *Wassermann reaction is positive in the serum and negative in the fluid*. According to this author, *this is an important point in making the differentiation between general paralysis and syphilis of the central nervous system*.

In Plaut's monograph we find eighteen cases of cerebrospinal lues which he divides into three groups; fourteen cases gave negative reaction of the spinal fluid, but a positive serum reaction; three cases with positive reaction in both serum and spinal fluid; and in one case in which cerebrospinal fluid and serum were negative. In a more recent contribution, Plaut reported thirty-seven cases of cerebrospinal syphilis, and in only four fluids the Wassermann test was weakly positive. Plaut is of the opinion that in border-line cases, where the diagnosis lies between

general paralysis and cerebrospinal syphilis, the Wassermann test is of doubtful value, and great caution should be exercised in interpreting results. A marked positive reaction of the fluid argues in behalf of general paralysis; a negative fluid reaction does not necessarily rule out general paralysis, for there are cases on record in which the fluid was negative. If both the fluid and serum be negative, cerebrospinal syphilis might be considered.

Nonne and Holzmann examined the sera in twenty-two cases and found negative Wassermann reaction in two instances; and of twenty-seven fluids in only one complement deviation was present. Saathoff's twenty-five cases of syphilitic brain and cord disease—fifty per cent of which were confirmed by autopsy and treatment—showed a positive Wassermann reaction in the serum. Eichelberg and Pfortner demonstrated a positive reaction in the serum of their seven cases, and six fluids reacted negatively. They maintain that a positive fluid is suggestive of paresis. In Bendixsohn's eight cases complement deviation in the serum was elicited, and two fluids were positive; one of these developed into an undoubted case of paresis and the other one was rather under suspicion. Of Zalociecki's three cases, two showed a negative Wassermann test, but they had been treated with anti-syphilitic remedies. Also Sonnenberg had one negative serum in his seven cases. However, of Reinhart's forty cases, sixty per cent were positive in the serum, and Purkhauer's five out of eleven cases gave negative results. In Kafka's seven cases complement deviation was demonstrable in the serum and in one fluid only.

In cerebrospinal syphilis, as in general paralysis, lymphocytosis is usually present; in more acute processes the cell count is high and frequently polynuclear leucocytes are observed. Globulin content, especially in acute conditions, is invariably increased.

Our material consists of ten cases, two of which came to autopsy; in the others the diagnosis of cerebral syphilis clinically is rather suggestive. In this communication only brief mention will be made of them. In another con-

tribution, the author will give the clinical data more in detail. We may divide our cases into three groups: first, gummatous; second, meningeal; and third, endarteritic.

I. GUMMATOUS. (ONE CASE WITH AUTOPSY.)

CASE 1. The patient was 50 years of age, intemperate. The development of the disorder was not known. Physically he showed irregular pupils which reacted to light; exaggerated knee-jerks; tenderness over nerve trunks; some arteriosclerosis; no ankle clonus or Babinski; albumen with pus and epithelial cells in the urine. Mentally, patient was dull, inactive, rather confused and muttered unintelligibly. He had difficulty in comprehending questions; could not carry out simple commands; and there were evidences of paraphasia. Soon after admission to the hospital he succumbed to pneumonia.

Postmortem examination showed cerebrospinal meningitis, solitary gumma beneath the left prefrontal, and there were no evidences of paretic process.

The laboratory findings were as follows: Wassermann test in blood positive; negative in the fluid; globulin present; fifty-two lymphocytes per cubic milimeter.

CASE 2. L. P., was admitted June 9, 1905, and readmitted August 9, 1906; age 37; married; led an irregular sexual life; history of syphilis could not be determined.

In 1903, two years prior to her admission, she began to complain of pain in the back and head (temporal region); became suspicious of her husband, and four months before admission she began to have vomiting which was independent of ingestion of food. Two months later convulsions were manifest. Usually after the convulsions she would become confused, and in one of these states she grew restless and tried to run away.

Upon admission to the hospital she was quiet, pleasant and smiled good naturedly; she stated that she had fainting attacks. She was oriented and her memory was said to be good. The writing was slightly tremulous and letters were poorly formed. She admitted that she was not well mentally because she was absent-minded and had imaginations.

Physically, exaggerated knee-jerks, unequal, sluggish pupils, some evidences of healed ulcer of the tongue, and positive lymphocytosis of the cerebrospinal fluid were noted. During her residence in the hospital she had convulsions, and in August, 1905, symptoms of motor aphasia, with right-sided hemiplegia, developed. In November, 1905, optic neuritis (W. A. Holden) and swelling over zygomatic region were observed. She was subjected to anti-syphilitic treatment, and soon the aphasic symptoms disappeared. April 9, 1906, she was allowed to go home, and at that time she was described as simple

in her manner; had vague fears about her future; however, her memory was good, and her speech showed some defect in handling the usual test phrases.

August 1, 1906, she was readmitted to the hospital. During her residence here patient's condition has shown no important changes. At times she is irritable and resents her detention; at other times she is pleasant and agreeable; employs herself fairly efficiently, and takes good care of her person. She exhibits faulty judgment. Her memory for remote happenings is poor, although orientation is fairly good. There are no hallucinations or delusions. She has had convulsions which were general, and on several occasions they were limited to the right side; she is also subject to fainting attacks.

Her physical health is good; residuals of right-sided hemiplegia; mobile pupils; over-active knee-jerks; no tremors; no defect in speech in ordinary conversation.

Wassermann in the blood is positive; negative in the fluid; one lymphocyte per cubic milimeter; no increase of globulin.

CASE 3. G. F. Admitted January 3, 1908. Age 44; Russian Hebrew; history of syphilis not determined; led an irregular sexual life; three children died in convulsions before one year old, and one still birth, and one died a few hours after birth. She had two attacks of excitement, for which she was treated in a hospital for the insane; it is said that she made a complete recovery.

The psychosis became manifest in June, 1907. The early symptoms were depression, volubility of speech, and headache. For three days patient was in coma. In November and December, 1907, she was restless, confused, and at times apathetic and inactive. In the hospital the patient was decidedly manic; however, at times she reacted to hallucinations which were accompanied by apprehension. On account of her inaccessibility, it was impossible to test her memory or orientation.

Physical status: In June, 1907, she suffered with headache, dizziness, diplopia, and had one convulsion. In October, 1907, choked discs with retinal hemorrhages were noticed, which cleared up on anti-luetic treatment. The right pupil is immobile and larger than the left one; unequal knee-jerks, right more active; the right side of the face is slightly elongated; no tremors. *Wassermann test in the blood is positive; negative in the fluid; no globulin; seven lymphocytes per cubic milimeter.*

II. MENINGITIC.

CASE 4. E. P. Admitted November 2, 1910. Age 40; United States; widow; the development of the psychosis was not known. While in a general hospital in New York she was noted as confused, reacting to auditory hallucinations and misidentifying those about her.

When admitted to the Manhattan State Hospital, physical examination showed complete paralysis of the left third and fourth cranial nerves; unequal, irregular pupils (right smaller than left) which reacted sluggishly to light; marked exophthalmus; occasional nystagmoid twitchings in both eyes; unequal and exaggerated knee-jerks (left more active); suspicion of Babinski and Oppenheim (left); marked Romberg; gait poor; tremor of tongue and both hands; inability to pronounce the usual test phrases; tenderness of both lower and upper extremities; incontinence of both bladder and rectum.

Wassermann test in the blood was positive; however, negative in the fluid; globulin positive; one hundred twenty-one lymphocytes per cubic millimeter.

The mental picture was one of marked irritability, with confusion and fabrications. Orientation, memory and retention were very poor. She was unable to give a connected account of herself. She exhibited no insight; hallucinations or delusions were not demonstrated. Writing, aside from some tremor, presented no defect.

In the early part of December, partial ptosis (right eye) was observed, and the pupils reacted more sluggishly to light.

In February, 1911, the patient reacted to hallucinations. At that time deviation of the tongue to left, with slight thinning of left side of face, was observed. In March, atrophy of the left side of the tongue was noted. Mental condition remained without important changes. Drastic anti-syphilitic treatment was resorted to, but without avail. April 11, patient had a general convulsion, and soon death occurred.

Postmortem findings were as follows: *Syphilitic cerebral endarteritis; chronic syphilitic meningitis and ependymitis, and internal cerebral hemorrhage.*

III. ENDARTERITIC.

CASE 5. E. V. Admitted January 6, 1895. Age 44, Italian, widow. No anamnesis. It is said that in 1890 she had a paralytic stroke, and since then patient has been paralyzed and a bed-ridden invalid. Physically she showed paralysis of both extremities, with involvement of the right upper extremity and right side of face; double Babinski, and some atrophies; thick speech, with poor articulation; unequal pupils, dilatation and loss of light reaction of right pupil. Paralysis of the third nerve (right); both knee-jerks diminished, and the left one is questionable; inability to stand or walk. Wassermann in the blood is positive; negative in the fluid; no globulin, and only three lymphocytes per cubic millimeter.

Mentally, the patient is rather optimistic, exhibits a relatively good memory and orientation, and there are no psychotic trends. In other words, we have a mild degree of dementia without marked memory defect.

Serum positive; fluid negative; globulin negative; three lymphocytes per cubic milimeter.

CASE 6. H. S. Readmitted August 20, 1910. Age 35, New York, single, tinsmith. In 1905 he commenced to show signs of psychosis—ideas of reference, peculiar behavior and ideas of persecution. In 1904 he had a chancre. From March 19, 1904 to July 8, 1904, he was a patient in this hospital. At that time he spoke of women exerting telepathic influences, and had other queer ideas. After discharge he resumed his work, but grew forgetful, and often spoke of his delusions and hallucinations. Finally commitment was imperative.

When readmitted, he showed a very clear picture of dementia præcox, paranoid type, and during his stay here he gradually deteriorated.

Physically he presents the following: Irregular pupils, especially the right one; the reaction in the left is good, in the right poor; over-active knee-jerks; no Babinski; paresis of left side of face. *Wassermann in the blood positive; fluid negative; globulin present; lymphocytes seventy.*

In this case we have dementia præcox upon which syphilis was engrafted and produced some neurological signs.

CASE 7. E. D. Admitted June 9, 1909. Age 26, New York, single, intemperate; history of syphilis three years prior to admission to the hospital.

The psychosis was gradual, about twenty months' duration preceding his commitment; delusions of persecution; some depression, hallucinations and peculiar behavior were the prominent symptoms.

When admitted to the hospital physical status showed evidences of past syphilis, mobile pupils, exaggerated knee-jerks, and some tremors of the tongue.

Mentally, he was suspicious, evasive, had some high opinions of his ability, and attributed his trouble to syphilis. He spoke volubly and in a rather disconnected manner. Although he denied hallucinations, yet some of his statements were rather suspicious of hallucinatory experiences. He was approximately oriented, and memory, retention and grasp showed no defect. Writing and speech were without anomalies.

During his residence in the hospital patient rapidly declined mentally. At present his speech is incoherent and memory is very poor. He shows considerable indifference, and his behavior is odd. Orientation is good.

Physically, knee-jerks are exaggerated; some tremor of tongue; no speech defect; writing tremulous, but no omission of syllables noticed.

Wassermann of the blood positive; fluid negative; globulin present; lymphocytes forty-four.

In this case we have a dementia præcox picture with few physical signs, which could be either explained on paretic process or cerebral

syphilis. For the present, the somatic manifestations are ascribed to *syphilis*, and the case is looked upon as one of cerebral syphilis.

CASE 8. M. H. Admitted January 17, 1911. Age 45, widowed, bartender.

The patient was born in Germany 45 years ago. He indulged in alcoholic beverages, and at one time had an alcoholic psychosis for which he was treated in Bellevue Hospital. He had contracted syphilis in 1894. In August, 1910, he had an unconscious spell, from which he recovered. In September he complained of pains in his legs and knees, and suffered from headaches. At first he was buoyant in spirit, and later grew dull and apathetic. He had difficulty in deglutition and his speech became thick.

Upon admission to the hospital neurological status showed unequal and irregular pupils (right dilated and left contracted) which reacted promptly to light and accommodation; evidences of left-sided hemiplegia (including face); defective speech; tremor of tongue and facial muscles; writing revealed some omission of letters. *Wassermann in the blood positive; fluid negative; globulin positive, and there were one hundred forty-one cells.*

Mentally the patient was dull, slightly depressed, spoke coherently and recounted the events of his life without showing any discrepancies in dates. Retention was fair, and orientation was not impaired; no psychotic trend determined. He exhibited good insight into his physical condition. Under anti-syphilitic treatment the lymphocytosis decreased to eleven cells per cubic milimeter, but the Wassermann in the blood was still reported positive.

This is one of the cases in which the diagnosis is obscure. The patient shows many signs of paresis with focal symptoms, yet cerebral syphilis can not very well be excluded. From the neurological and cytological standpoint, the diagnosis would be cerebral lues. The diagnosis in this case is still in abeyance. This case serves to illustrate the difficulty one encounters in making a diagnosis of cerebral lues of a case the clinical picture of *which is so involved*.

CASE 9. A. P. Admitted December 22, 1910. Age 23, American-Italian, single; no history of syphilis. In 1908 patient had an attack of depression with suicidal attempt.

Shortly before admission to the hospital patient became depressed and attempted to shoot himself, and sustained a superficial gunshot wound over the right temporal region. In the hospital he was depressed and hypersensitive, but without any defect in the intellectual field. He recovered and was discharged as "depression not sufficiently differentiated."

Physical examination showed irregular pupils, which did not react to light, photophobia, and active knee-jerks.

Wassermann in the blood and fluid was negative; globulin positive, and there were forty-seven cells.

This is probably a case of hereditary cerebral syphilis. At no time

were there symptoms of paresis. At the time of his discharge he was perfectly well, but the *eye symptoms still persisted*.

CASE 10. T. B. Admitted January 21, 1911. Aged 50, Russian, married; history of syphilis not obtained.

Shortly before admission to the hospital he had chills and fever, for which he was treated in a general hospital. Following this he became depressed, could not walk, and at times appeared semi-stuporous. (Psychotic trends or peculiar behavior not observed.)

Upon admission here physical examination showed unequal and irregular pupils which reacted slowly to light; diminished knee-jerks, especially the left one; some arteriosclerosis; writing slightly tremulous, and there was a coarse tremor of both hands. There were no evidences of meningeal irritation. *Wassermann test in the serum was positive; marked globulin, and one hundred sixty lymphocytes and two hundred seventy-one leucocytes.*

Mental picture was one of mild depression with a poor memory, but without delusions or hallucinations. He was rather an ignorant man and it was difficult to say whether the memory defect was acquired or peculiar to his makeup. He remained under our observation a very short time. He was deported to Russia.

In this case the diagnosis of cerebral syphilis would come up, but again a positive diagnosis could not be made. Serologically and cytologically cerebral syphilis is very probable; however, the diagnosis on purely laboratory findings the writer is disinclined to make.

C. *Tabes*.

The investigations of tabes give varying results with different authors. Schultze found in sixty-five per cent of his cases a positive Wassermann in the serum and in eighty per cent the Wassermann test was positive in the fluid. Eichelberg and Pfortner's seven cases showed complement deviation in five fluids and six sera. Of Marinesco's fifteen cases, eight were positive in the fluid and twelve were positive in the serum. On the other hand Reinhart had one hundred per cent of positive Wassermann reactions in the serum and fluid. Jacobsthal, Jarcowsky and Raichman found the liquor positive and the serum negative. Of Nonne's cases fifty per cent were positive; and more recently the same author found of forty-nine cases only two fluids positive, and in seventy per cent the serum gave a Wassermann reaction. Plaut's sixteen tabetics were mostly in the incipient stage of the disease; in six the spinal fluids reacted positively, one was slightly

positive and three negative; the serum was positive in eight and negative in two. In only one instance the spinal fluid alone was examined, which was reported positive; in four cases the serum only was examined and one of them was negative. In a more recent contribution Plaut selected four hundred sera and one hundred twenty-seven spinal fluids of tabes; seventy-one per cent and fifty-nine per cent respectively showed a positive reaction.

We had only two cases of tabes with psychosis, the results of which are as follows: In one, Wassermann reaction was present in the blood, but not in the fluid; globulin was only slightly increased, and there were one hundred two lymphocytes. In the other case the Wassermann test was negative in the blood and fluid; there was no globulin, and there were fifty-nine lymphocytes.

In another case the diagnosis is not very clear. The question of general paralysis and tabes with a psychosis comes up for consideration. If the laboratory findings in general paralysis be decidedly pathognomonic, then this case should be interpreted as one of paresis. At the present time, one is reluctant to make a diagnosis. The following is a brief report of the case.

TABES OR GENERAL PARALYSIS.

E. G. Admitted January 21, 1911. Age 38, England, musician. Patient was arrested for creating a disturbance on the street.

When admitted here, the neurological status showed Argyll-Robertson pupils; very diminished knee-jerks (only obtainable on reinforcement); Charcot joint (right foot); no tremors; no speech or writing defect; no Romberg sign. Wassermann in the blood and fluid was positive; globulin positive, and forty-two lymphocytes per cubic millimeter. Syphilis fourteen years ago.

The mental picture was one of manic-depressive excitement, with grandiose and expansive ideas and without memory defect or faulty retention. Soon excitement simmered down; however, ideas of self-importance, still persisted, but without any intellectual defect.

SECOND GROUP.

A. *Organic psychosis of a non-luetic nature.*

The clinician is well acquainted with the fact that we have certain forms of mental disease which may simulate

general paralysis or cerebrospinal syphilis, and not infrequently a differential diagnosis is very difficult. In such instances, the clinical laboratory is of great value, and especially in certain obscure conditions where the etiology is important to ascertain in order to institute early therapy. In our studies, we have selected cases in which the clinical diagnosis was unmistakable. The object of obtaining laboratory findings was to determine their value in such conditions.

The literature on the subject is not abundant, and we may only briefly refer to some investigators. Nonne had ten cases of tumors, with autopsies; in all of them the fluid was negative and the serum was positive only once. In that case, the patient had a growth on his forehead, which disappeared under anti-syphilitic treatment. Saathoff and Reinhardt had similar results. Plaut's six cases also reacted negatively to the Wassermann test. We had three cases of brain tumor, one with autopsy, in which the Wassermann reaction was negative in the blood and fluid; there was no increase of globulin or lymphocytosis.

B. *Epileptics.*

The serological, chemical and cytological content in epilepsy is not of striking significance. The laboratory findings are usually negative, unless the disease-picture is complicated by luetic infection. Nonne and Holzmann found five positive sera in their thirty-three cases of epilepsy, and in all of them the cerebrospinal fluid showed no complement deviation. Nonne's former investigation of nine cases gave five positive sera; however, later it was demonstrated that one patient developed ataxia, hypotonus, diplopia and anosmia. Under mercurial treatment the symptoms disappeared. Another patient presented suspicious signs of cerebral lues. In two cases history of syphilis in the father was elicited. Convulsions subsided under treatment. In the last case, a syphilitic etiology could not be determined. Nonne and Holzmann maintain that the Wassermann reaction is wanting in idiopathic epilepsy without syphilis, and in cases when the Wassermann test is positive, a luetic etiology should come under consideration.

Of Eichelberg and Pfortner's seventeen cases of epilepsy, five gave a positive Wassermann test in the serum and the cerebrospinal fluid was negative. These authors hold that complement deviation in epilepsy is independent of syphilis, and could be ascribed to the nature of the disease process *per se*.

In Plaut's monograph of 1909 three cases of epilepsy are reported and in all of them the findings were negative. Of his recent twenty cases only one had a positive Wassermann reaction, and this one presented a history of syphilis. In four only the fluids were examined with negative results, even in the case where the serum was positive.

Kafka examined two cerebrospinal fluids of epileptics with negative findings, and likewise Zalociecki's six cases gave similar results. Of Lippman's nineteen cases, in only one the Wassermann reaction in the serum and blood was positive. In addition to these cases, he examined five other sera of epileptics in which complement deviation was present. In four of them a syphilitic history was satisfactorily demonstrated. In Hubner's nine epileptics the Wassermann reaction was not obtained.

Plaut maintains that the presence of a Wassermann reaction in idiopathic epilepsy should not be regarded as a phenomenon of epilepsy, but as a complication of a luetic infection. Whether we are dealing with a syphilitic or non-syphilitic epilepsy will depend upon the entire course and progress of the disease-picture.

It is generally conceded that in epilepsy there is no increase of globulin and no lymphocytosis.

We had twenty-two cases of epileptic psychosis at our disposal; in all of them the diagnosis of epilepsy was very clear. In four the serum was positive, and strange as it may seem, a history of syphilis could not be determined. In one case the fluid reacted positively to Wassermann test. In two instances globulin was present, in one of them it was very slight. The number of lymphocytes was very low except in four cases. It may be tabulated as follows:

Number of Cases.	Number of cells per cubic milimeter.
1	6
1	5
1	10
1	15
1	23
1	7
2	4
3	2
6	1
3	0
1	3
1	1
<hr/>	
22 cases.	

Of these twenty-two cases three presented rather anomalous features from the point of view of serology, cytology, and chemistry. All the three epileptics have had convulsions for years; two since early childhood, and the other since the age of 18 (present age about 30). They present the usual signs of mental stigmata peculiar to epilepsy; there is no history of syphilis and signs of organic brain disease can not be determined. The laboratory findings in the cases were as follows:

CASE I	CASE II	CASE III
Serum negative.	Serum positive.	Serum negative.
Fluid negative.	Fluid negative.	Fluid negative.
Globulin mild.	Globulin negative.	Globulin negative.
Lymphocytes 15 per c. m.	Lymphocytes 7 per c. m.	Lymphocytes 23 per c. m.

These patients were put on anti-syphilitic treatment (Potassii Iodi. gr. XV and Mercurii Chloride gr. $\frac{1}{32}$ —three times a day), and five months later another serological, cytological and chemical examination was undertaken and the four tests were absolutely negative. Nevertheless the patients are subject to convulsions which recur as frequently as formerly. These cases are difficult to interpret; one would naturally think that some error in the laboratory technique had been committed.

C. Chronic alcoholic psychoses; arteriosclerosis; senile psychosis; and traumatic psychoses.

It is generally contended that in chronic alcoholic psychoses, arteriosclerotic insanity, senile dementia, and traumatic psychoses, no abnormal manifestations from the point of view of serology, chemistry and cytology are demonstrable.

ACCORDING TO PLAUT:	NEGATIVE		POSITIVE	
	Fluid	Serum	Fluid	Serum
Chronic Alcoholism.....	8	10	—	—
Korsakoff Psychosis.....	3	5	—	—
Alcoholic Delusional Insanity....	4	4	—	—
Arteriosclerosis.....	13	17	—	1
Post Traumatic Psychoses.....	2	—	—	—
Dementia Senilis.....	—	1	—	—

Nonne had three cases of alcoholic pseudo tabes; in two the fluid was positive, and more recently he examined seven cases and in all of them both the fluid and serum revealed no complement deviation.

Our material contained thirty alcoholic cases, ten of which were of Korsakoff form, and twenty were acute hallucinosis, paranoid form, etc. The first ten cases showed no Wassermann reaction in the blood or fluid; there was no lymphocytosis or increase of globulin. In one case we obtained a history of syphilis. Nevertheless, the laboratory findings were entirely negative. Of the twenty other cases, in fifteen Wassermann reaction was not demonstrated either in the blood or fluid. In five the serum was positive, and only one fluid revealed the complement deviation with increase of globulin. In that case particularly, there were no symptoms of paresis, and a history of syphilis was denied. In three cases a history of syphilis was obtained. In none of these cases lymphocytosis or increase of globulin (except in one as stated) was determined.

Fourteen cases of arteriosclerotic insanity and senile psy-

chosis and one traumatic psychosis presented negative laboratory findings; in other words, the four tests were negative.

D. *Functional Psychosis.*

Of functional psychosis we had seventeen cases of dementia præcox, eighteen manic-depressive insanity, and four constitutional inferiority. In three cases of dementia præcox there was a positive Wassermann reaction in the blood, and in only two a history of syphilis was elicited. In four cases of manic-depressive insanity, a positive Wassermann test in the blood was found; in only one a history of syphilis was obtained, and the other case was examined a few days prior to an attack of erysipelas. The four cases of constitutional inferiority also gave negative results in the blood and fluid. In none of these cases an increase of globulin or lymphocytosis was in evidence.

CONCLUDING REMARKS.

Before attempting to offer deductive conclusions, it is necessary to recall the fact that although some give recognition to the specificity of the Wassermann reaction, yet the true biologic significance is not fully known. The nature of the Wassermann test is still *sub judice*. We have only a tentative explanation of the theory of the Wassermann reaction. Indeed Plaut very conservatively remarks: "(1) The Wassermann reaction for syphilis is a biologic, specific, antigen-antibody reaction; on the one hand the antibody has the peculiarity of reacting, not only with syphilitic antigen, but also with normal connective tissue constituents, and on the other hand the antigen is closely related to lipid substances or is a specific albumen-lipoid combination. (2) The active substances of the syphilitic serum are not antibodies, but are substances which owe their origin to syphilitic infection and possess a chemical affinity for lipoids (toxins). (3) In the Wassermann reaction, specific and non-specific combination processes go hand in hand."

One must remember that Wassermann reaction can be

demonstrated as a transitory phenomenon in scarlet fever, malaria, lepra, trypanasomia, tuberculosis, and not infrequently it is also found in normal individuals, and then again this test is not elicited in cases with a history of syphilis. In spite of the fact that every possible effort is made to perfect laboratory technique, nevertheless, errors occur with the very best trained laboratory workers. Since the nature of the biologic process is still unknown, the test can only be regarded as of relative significance and should only be taken in conjunction with other laboratory tests and clinical data.

The following conclusions are submitted:

I. In order to make a complete laboratory report of neurologic or psychiatric validity, it is essential to examine the blood and fluid for complement deviation, and, in addition to this, cytological and chemical tests of the cerebral spinal fluid should be made. An examination of the blood alone will throw no light on the psychiatric or neurologic diagnosis. It must be also emphasized that in suspicious cases, several examinations of the blood and fluid should be performed.

II. The one hundred cases of general paralysis gave sixty-three per cent of positive Wassermann in the fluid and blood; seven per cent revealed a positive Wassermann only in the blood; in sixteen per cent the Wassermann reaction was present only in the fluid; in four per cent of the cases, Wassermann test in the blood and fluid was negative.

It will be remembered that the French school maintains that (1) in the incipient stages of general paralysis the Wassermann reaction is present in the blood and not in the fluid; (2) in the fully developed stage both the blood and fluid show complement deviation, and (3) in the last stage of the disease the fluid but not the blood gives a positive Wassermann test. We have had no experience with incipient cases of general paralysis; forty-nine out of seventy-two cases substantiate the second statement and in only seven of twenty-two general paralytics of the last stage confirmed the third statement.

It is important to note that some of our cases gave a negative Wassermann test in the blood, also there are other instances in which the Wassermann test was negative in the fluid, and again there are cases which show a negative Wassermann reaction both in the blood and fluid; and these findings bore no relation to the course and progress of the disease process.

In all our cases except two, lymphocytosis was demonstrated with varying intensity, but no distinct parallel with the course of the disease could be established. It may be safely stated that in the majority of our cases the four reactions were, as a rule, present. Beyond a shadow of doubt, the cytological reaction, plus the globulin content, are of profound significance, and are always indicative of an organic process in the central nervous system.

III. In cerebral syphilis the four reactions are not always elicited. In two cases of cerebral syphilis, which were confirmed by postmortem examination, the Wassermann reaction was present in the blood, but not in the fluid, and globulin increase and lymphocytosis were manifested. These results confirm Plaut's views of the serological content of the blood and fluid in cerebral syphilis.

In chronic syphilitic endarteritis of a non-active and apparently healed gummata process, the blood gave a complement deviation, the fluid was negative for Wassermann test, globulin was not increased, and the cell-count was very low—only three lymphocytes per cubic millimeter. In other cases where the syphilitic process was relatively young or active, the results were the same as those obtained by Plaut. However, the writer is reluctant to employ his material for deductive purposes. It is important to call attention to these anomalous features, and only such material could be utilized for deduction as could be supported by autopsy.

Our tabetic material is too small to be commented upon. It is worthy of emphasis that the four reactions were not present in the two cases.

IV. The alcoholic psychoses present no pathological phenomena in the fluid; however, in some of the cases

Wassermann reaction was present in the blood and indeed in some instances a history of syphilitic infection was obtained. Likewise arteriosclerotic and senile mental diseases and functional psychoses (such as dementia præcox, manic-depressive insanity, etc.) gave similar results.

V. In epileptic psychoses, as a rule, neither the blood nor the fluid reveals abnormal constituents. Strange as it may seem that three of the twenty-two cases of epileptic psychoses on the first examination showed some abnormal phenomena in the blood and fluid. Under anti-syphilitic treatment these pathologic manifestations disappeared. It is very difficult to interpret these results.

VI. While no examination of an organic mental disease is complete without a full laboratory report, from the standpoint of serology, cytology and chemistry, nevertheless, at the present state of our knowledge, one feels that a clinical laboratory can not be considered as the ultimate court of appeals for deciding disputed diagnosis of border-line cases. The clinical observations can not be undermined; the development of disease can not be ignored and the progress and course of the clinical phenomena should be carefully considered. The laboratory results can only be utilized together with the clinical data.

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REVIEW OF BLEULER'S SCHIZOPHRENIA.*

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The work of Bleuler on dementia præcox is undoubtedly one of the most important contributions which have been made to psychiatry for a long time. The most admirable part is the symptom-analysis which contains much that is of great value to every psychiatrist.

In discussing the book it is of course necessary, first, to be clear as to what Bleuler means by schizophrenia, and what he includes in this group,[†] because it comprises a great deal more than the group of dementia præcox, such as others conceive it. It contains all paranoic states, which are not the typical Kræpelinian paranoia; most psychoses which arise on the basis of psychopathic inferiority; probably many cases which, in order to emphasize certain impurities in the clinical picture, we here call "allied to manic-depressive insanity," and, indeed, not a few cases which we would not hesitate to group as typical manic states; furthermore, the transitory hallucinatory and paranoic states, and Bleuler even suggests that the acute alcoholic hallucinosis may belong here entirely; again, all the chronic alcoholic paranoic or hallucinatory states; the prison psychoses and, as we shall see, many states which we prefer to call abnormalities of make-up. It is not surprising that Bleuler finds very little that remains to be classified in psychiatry, so far as the functional psychoses are concerned; and he practically mentions only the somewhat uncertain group of the fever psychoses. Therefore, with the exception of manic-depressive insanity, which to him is small, the few cases of Kræpelinian paranoia, and

* "Handbuch der Psychiatrie." Herausgegeben von Professor Dr. G. Aschaffenburg. Spezieller Teil, 4 Abteilung, 1 Hälfte. "Dementia Præcox oder Gruppe der Schizophrenien." Leipzig und Wien: Franz Deuticke, 1911.

† From the title of the book it is evident that Bleuler speaks of groups, and therefore admits the possibility of further subdivision, but he denies that such a subdivision is at present possible.

hysteria, everything within the functional group of psychoses is dementia præcox. Nor is it to be wondered at that, in this dementia præcox, only a comparatively small number of marked deteriorations occur. Bleuler puts the figure at 22 per cent, while 18 per cent present a moderate degree of deterioration, and as many as 60 per cent a mild degree of deterioration. He claims, however, that there is no case in which some defect is not seen, but this defect is sometimes very slight and may amount to not much more than a lack of adequate insight. In order to understand this we must be familiar with his conception of latent schizophrenia. Bleuler considers that probably the largest number of cases belonging to the group of schizophrenia are latent cases who rarely come to asylums. They are cases which are looked upon as nervous people or as psychopaths; among them he describes irritable persons who can not get along well, individuals with oddities, or those who are reticent, seclusive, or present an exaggerated scrupulousness and precision, and so forth. He admits that they are often difficult to diagnosticate, but they must have some of the fundamental symptoms which we shall presently speak of more at length, that is, a certain defect of logic, shut-in tendencies, or affective anomalies, more particularly a lack of interest in things which ought to interest them.

It is obvious that here Bleuler calls latent schizophrenia that which we would speak of as abnormalities of make-up, or what Adolf Meyer has called faulty mental habits. The question then, of course, arises, and Bleuler speaks of it in several places in his book, whether we are really dealing in such cases with a disease or with an abnormal mental make-up. Bleuler is inclined to the former view, and his whole conception is based on this, whereas we take the latter view. This latent schizophrenia exists in almost all cases who develop active or, as he calls them, secondary symptoms. That abnormalities exist whether they be latent symptoms or abnormalities of make-up, also makes it clear, it seems to me, why one should find, practically always, mild defects after the acute psychoses; yet I think it would be very difficult to demonstrate that these cases present really an in-

crease in their abnormalities after the psychosis. It is also interesting in this connection that Bleuler, in spite of regarding the latent schizophrenia as a part of the disease, speaks of transitions from latent schizophrenia to the normal.

So much for a general survey. It does not seem to me that this wide conception should detract very much from the value of the book in the eyes of anyone who does not agree with Bleuler's conception. By describing the symptoms within this large group, he has given many excellent observations. The question is whether or not these symptoms lead over to the grosser characteristics of the more accepted dementia præcox. It looks to me as if this were so, that is to say, as if he were describing mechanisms which throughout have a certain cohesion, but whether we shall make use of this fact as he does, remains to be seen.

In studying the symptomatology it is, at first sight, a little difficult to get clearness, because Bleuler speaks of fundamental symptoms and of accessory symptoms, but he speaks also of primary symptoms and secondary symptoms, and these two sets of groups are not co-extensive—the fundamental symptoms are not necessarily primary symptoms, though all accessory symptoms are secondary; some fundamental symptoms are, however, also secondary. Among the *fundamental* symptoms, by which he means symptoms which are always present to a certain extent in active as well as latent schizophrenia, he mentions, above all, a disorder of the association process, that is, a primary loosening of the connection. He also mentions abnormalities of the affective life, particularly a more or less extensive loss of interest, and that which he calls by a very good term “autism,” that is, the tendency to turn away from the outside world, or that which we have called shut-in tendencies. He also mentions other features, but these are the most important.

Among the *accessory* symptoms are the acute symptoms of the psychoses: delusions, hallucinations, catatonic states, &c.

Now the *primary* symptoms: By that he means the symptoms which are in his opinion directly due to the disease.

process which he postulates, admitting, however, that we do not know this process, and he also concedes that the possibility of a purely psychogenic origin of dementia præcox can not be denied absolutely. This supposed disease process he is inclined to regard as associated with some poison, and he takes the analogy of rheumatism which may be either chronic or acute, which may last a lifetime or stop. These primary symptoms, which he attributes directly to this underlying disease process, he also admits are not definitely known, and it should here be stated that Bleuler is very open in his theorizing and speaks of it as tentative. However, he is inclined to think that the association disorder, that is, as I said, a loosening of the associations which gives rise to elisions, to marked defects in logical thinking, even to imperfect concepts, &c., is a primary defect. As we shall see, Bleuler explains a great deal in the clinical picture of schizophrenia psychologically on Freudian mechanisms; the blocking and other disorders in thinking, acting, and feeling, are referred to a great extent to this. But he is evidently of the opinion that this is not enough, but that some fundamental disorder must be assumed to make such extensive complex-manifestations possible. Of course it is a question whether that is so. In addition to the association disorder, there is very little that is primary. He mentions states of torpor (*Benommenheit*), conditions which occur at times in the course of dementia præcox and which have been described by Reichardt and others, and in connection with which cerebral edema has been found. These cases are sometimes fatal, or at any rate, according to Bleuler, prognostically always serious so far as deterioration is concerned. He admits, however, that we are not sure whether these conditions are really primary, whether they might not be due to vasomotor changes which, though they produce physical changes, might yet be essentially secondary to the process. He also regards the manic-depressive waves as being directly due to this disease process, largely because manic-depressive waves occur in general paralysis, and also because organic, nutritional states produce emotional waves. He also speaks of the

possibility that the tendency to hallucinations and stereotypy are primary symptoms, although both of these manifestations he admits to be essentially due to Freudian mechanisms; but he evidently looks upon the tendency as something more. Chronic catatonic conditions are also included here, though every catatonic symptom in the acute states is explained psychogenetically. He finally mentions some bodily symptoms, such as tremor, the pupil differences, vasomotor disorders, edemas, some of the catatonic attacks which, sometimes with hemiplegic distribution, give one the impression of organic phenomena. It is obvious that these primary symptoms have not a very firm foundation, although we can well see the reasons why something more fundamental than psychogenetic mechanisms is looked for.

As to the *secondary* symptoms, they are caused, as we have already said, by a combination of the action of the primary ones and the action of psychogenetic factors. However, he admits that his assumed disease process and the clinical pictures are often remarkably independent of each other, and that most syndromes do not depend upon the disease process. In spite of his conviction of the importance, therefore, of psychogenesis for the production of symptoms, and even acute syndromes, he lays very little stress, in his chapter on etiology, upon the mental causes. The reason for this is quite clear; it is because the mental causes do not produce the disease, but merely some symptoms, and as a matter of fact he has very little to offer in the way of etiology. According to Bleuler, mental causes produce attacks, but the disease has existed before.

We have now come to the point where we should go a little more thoroughly into the question of *demarcation*, and the possibility of *combination* with other disorders. We have above stated how much Bleuler includes in his schizophrenia. What naturally interests us most is the question of the relationship of manic-depressive insanity and schizophrenia. Manic-depressive states very often occur in his schizophrenia, and they differ more or less from the typical manic-depressive states. Some of these distinctions are quite familiar to all of us. There is a certain lack of unity

in the affective reaction; delusions with different affective tone may be expressed at the same time; the relation between ideas and affect is not clear; the movements of expression may not harmonize among themselves; the manifestations of emotions are not deep and frank, but shallow and stiff; there may be a lack of modulation in the talk of the patient; the sound associations are often far-fetched in contradistinction to what is seen in the pure manic states (due to the association disorder); a fascination by external impressions may lead to a senseless naming of things about the patient which is quite different from distractibility; the absence of an over-activity which would correspond to the mood always speaks for dementia præcox, except in mixed manic states, the existence of which, by the way, he admits. He finally also mentions the lack of contact with the environment. All these differences may be more or less marked. In speaking of the depressive conditions, he mentions the existence of typical retardation in dementia præcox, but also mentions states of reduction of activity, which lack the consistency of typical retardation as well as the accompanying deep affect. It is also interesting that, so far as I can see, all the states of feeling of unreality and depersonalization are to Bleuler schizophrenias. He speaks of the difficulty of differentiating between dementia præcox stupor and retarded stupor, and mentions the usual distinctions. It is of interest that all these conditions resembling manic-depressive insanity, but with the admixture of schizophrenic symptoms, and hence included by Bleuler in his dementia præcox, have, as a rule, a good prognosis; and in this connection we may mention the fact that in his chapter on prognosis he says that cases which had one or two good remissions very rarely deteriorate, or, in another place, that recurrent manic-depressive states of dementia præcox usually do well, but on rare occasions deteriorate very badly. One might, of course, ask why we should not speak then of a combination of manic-depressive reactions and dementia præcox reactions, and why, in spite of a relatively good prognosis, we should lay so much stress upon differences which are often rela-

tively slight. Of course the idea of any combination of reaction in this connection is in many ways opposed to Bleuler's conception, since he regards dementia præcox as a disease process, whereas he probably would not feel quite so averse to the concept of reaction in the case of manic-depressive insanity. For this reason, just as in the case of general paralysis, he must conceive of the dementia præcox as the essential, of which the manic-depressive swings are an outcome. Nevertheless, he admits the possibilities of a combination of the two disorders to a small extent. He mentions the well known fact that dementia præcox cases who start with paranoic symptoms rarely develop depressions, and very rarely manic attacks in the further course of the disorder. If the latter happens, however, as it occasionally does, he is willing to entertain the possibility of a combination, but, of course, a combination of diseases, not of reactions. The same he says of another group, namely, the cases who without deteriorating have circular attacks on the basis of an otherwise latent schizophrenia. He adds that a manic-depressive heredity might then help to make the assumption of a combination more probable.

Late catatonias often begin as involution melancholias, and are then to be regarded as schizophrenias. Depressions are very common in schizophrenia, and, if I understand him correctly, any hallucinations which are not in harmony with the mood, oddities in behavior, or any peculiarities in make-up, would at once put the case into schizophrenia.

For brevity sake I will say only a few words about epilepsy. The combination is rare, although epileptic attacks occur in schizophrenia. We may also pass over the combinations with organic disorders.

Interesting is the question of hysteria. Every hysterical symptom may occur in dementia præcox, but whether a combination is possible can not be settled because, according to Bleuler, we do not know the fundamental process in either the one or the other. Paranoia may be a very chronic dementia præcox, the mechanism of delusion formation is the same, but we do not find real schizophrenic symptoms.

Important is his attitude toward the alcoholic psychoses. Ten per cent of his dementia præcox cases are alcoholics, who take alcohol on account of their dementia præcox, and he claims never to have seen the sequence of alcoholism-dementia præcox but only that of dementia præcox-alcoholism. We have seen that he suggests the possibility of the alcoholic hallucinosis being in reality a schizophrenia, but he lays stress on the good prognosis when it is not associated with the more characteristic symptoms; on the other hand all kinds of less typical hallucinatory and delusional episodes are frequently produced in schizophrenia by alcohol. The delirium also may have admixtures. Here he adds nothing to what Bonhoeffer has stated. He describes a delirium as a peculiar state of consciousness, with variations of level, hallucinations of vision and touch, a mood which presents a mixture of anxiousness and euphoria, occupation delirium, and poor retrospective recollection. If to this are added stereotypies, or hallucinations of body sense, such as electrical influences, or if there be a prominence of auditory hallucinations, then we have mixtures of schizophrenia and an alcoholic psychosis. I have already mentioned that the chronic alcoholic psychoses are essentially dementia præcox.

We next have to take up the *symptoms and symptom descriptions more in detail*, together with their explanation as Bleuler gives it. As I have said, the part which refers to this is extremely interesting, not only for the psychology of dementia præcox but for psychiatry in general, since Bleuler here attempts an explanation of many symptoms in his characteristically clear and well-balanced manner, and since the book is the first comprehensive work on a subject of psychiatry, in which the principles of psychoanalysis are made extensive use of.

It is perhaps well to mention, first, the *functions which are not affected*. Under this heading he takes up apprehension, orientation, memory, consciousness, and motility, and justly makes a sharp distinction between dementia præcox and the organic psychoses which are the expression of a diffuse degeneration of the cortex. He describes as the

essential alteration in these organic psychoses, the following: a lack of clearness in, and a slowness of, apprehension, an incapacity for complicated thinking, a memory defect, a disorder of orientation, a defect of attention, more particularly of the habitual attention. Quite interesting is what he says about the affectivity in the organic disorders. He claims that all affects are retained and correspond to the intellectual content, but are superficial. In other words, the affective deterioration in the organic conditions is secondary to the intellectual one. These diffuse disorders of apprehension, memory, and orientation are foreign to dementia præcox. There is no essential defect of apprehension. What appears to be is due either to a loss of the feeling of reality, or to blocking which temporarily excludes outside impressions, or other mechanisms. Often the patient registers without choice all the impressions, so that even more may be perceived and registered than in the normal. In this connection the memory should be taken up before the orientation. The many wrong answers need, of course, not mean either an apprehension or a memory defect. If a patient says that he does not know what year it is, but soon afterwards replies that he went to such and such a place in 1910, "two years ago," we know that his not telling us the present year was due to something different from an essential memory defect, such as we find in organic psychoses. Or, patients may speak symbolically, or transform the outside world in harmony with their ideas. Blocking of thought in connection with complexes also simulates an essential memory defect, and other dementia præcox traits produce similar results. In this connection he also mentions the lack of correlation of mental contents and the lack of adequate deliberation in thought due to lack of interest, the negativistic tendencies and the wrong answers due to associative elisions which, according to him, are due to a combined influence of complexes and the primary association disorder. At any rate, I think that most of us will agree with him that an essential memory and apprehension defect do not belong to the symptomatology of dementia præcox. We might question whether

we may not have a real apprehension disorder in connection with delirious states, and this brings us to the problem of the orientation. Nevertheless, he denies this; he denies that a primary orientation disorder exists even in the deliria of dementia præcox, but that the lack of clearness is always due to a falsification of the environment in harmony with the trends. If a patient believes himself to be in a royal hall, he has a certain difficulty in orienting himself correctly. If another patient, for psychogenic reasons, puts the time eight days ahead, he will give a wrong date; or, if he thinks he was born with Christ, he can not give his age unless that idea just at that time has no influence upon his mind. What he really means by primary disorientation is a clouding of the sensorium, which he defines as a primary disorder in the combining of sense impressions, the non-perception of many impressions, and their alteration in the sense of illusions, in other words, that which we find in conditions which we have called organic deliria. But such a defect of sensory contact he has not seen in dementia præcox, except to a certain extent in the torpor which occasionally occurs in fatal cases. The deliria, therefore, of dementia præcox are not fundamentally different from those of hysteria. Nevertheless, he also mentions in another place states of incoherence, conditions which, he says, correspond to the amentia of the Vienna school. These cases present restlessness and fragmentary incoherent productions. The mood may be variable; there are bodily symptoms, such as a coated tongue, perhaps some fever, and the patient has a poor grasp on the environment. He attributes this essentially to an intense association disorder, and so far as I can see, almost entirely to a primarily association disorder. They are, however, acute cases who do well, and it is difficult to see why such cases, if they were due to a flare up in the disease process, should have the same good prognosis as the acute states which are, as he says, independent of the disease process. All this offers a good example to show how difficult is the whole question of separating acute confusions. On the one hand, we have the more typical organic deliria; on the other hand,

the more psychogenic deliria, then the states of torpor and these incoherencies which all have a different basis and different mechanisms.

Among the functions which are not altered, we finally also come to the motility. He claims that all the changes which here occur are due to other fundamental symptoms, and he is probably correct in spite of the Wernicke school, the latest expression of which are the studies of Kleist.

Now as to the *changes which do occur*, we might first speak of the *train of thought*. This is altered in many ways. We have first to mention the *association disorder*, of which we have repeatedly spoken as we went along. Bleuler describes it very extensively, and yet somehow it is not so very easy to grasp the nature of this disorder; it is evidently not so very different from Wernicke's sejunction, though free from all localizing anatomical bywork. It is conceived of as a more or less widespread primary interruption of the associative connection of ideas. Actual or latent associations, which, in the normal, determine the train of thought or combinations of such ideas may remain without influence upon it in an apparently aimless fashion, whereas other ideas which have no connection may intrude themselves. Hence the train of thought is scattered, bizarre, illogical, abrupt. This may be so slight that it is difficult to discover, and in his description of mild conditions he says it may not be found, or only after a thorough search; it accounts for much of the scattering of ideas in chronic states, and, as we have said, it is supposed to be the explanatory principle in acute incoherence. On the other hand, similar phenomena may be due to the action of complexes, and have to be explained psychogenetically. But this psychogenetic explanation does not appear to him sufficient. It is somewhat difficult to see, especially when we consider the extensive symbolization and substitution, the indifference, the negativism, &c., why something beyond these psychogenetically explicable disorders is required.

In passing over to the description and explanation of the *symptoms which are explained largely on psychogenic principles*, it is important to state once more that here Bleuler

stands essentially on the same ground as Freud. This, in the writer's opinion, is to be regarded as a great advance in psychiatry.

The psychology of dementia præcox can not be understood unless we accept the importance of unconscious trains of thought, and the importance of the affects. All these factors manifest themselves through Freudian mechanisms. But this influence is a much more extensive one in dementia præcox than in the normal, or in hysteria, for example. The affects produce much more profound dissociations. The influence of reality is much more excluded. We might almost say, the individual manifestations stand in the mind much more like foreign bodies. We have attempted to account for this largely by the shut-in tendencies, while Bleuler attributes it, the shut-in tendencies included, to his primary association disorder, which we have described, and which gives the affects greater sway. He states that whereas the logical train of thought follows paths established by experience, the affects direct the train of thought according to desires and aversions. In the normal they are responsible only for the general direction of action, and the logical operations are not falsified except in realms where subjectivity is generally permitted to guide us, as in matters of taste, for example. In dementia præcox the affects disorder even otherwise well-grounded associations. Through this greater influence of the affects, the possibility of a more or less complete exclusion of all that does not harmonize with the affective complexes is also possible, so that these may assume more and more a certain autonomy, and can manifest themselves without there being any attempt at correlation.

Blocking, that is, an exaggeration of repression, is a symptom which in its characteristic form, is found only in dementia præcox and which refers not only to thought but also to motility. It is frequently interpreted by the patient as "the taking away of thoughts," or in some other way is one of the possibilities which give rise to that which we have called the "feeling of passivity." It is found usually, perhaps always, in connection only with thoughts which

are of great importance affectively; it is therefore often topical but may also become diffuse so as to lead to generalized blocking. The same principle also accounts for the fact that hallucinations and delusions are often difficult to express, nor fully accessible to the patient, because they are the products of complexes, and as such may be in part under the influence of repression. Blocking may not be entirely unsurmountable, and there are transitions to conscious disinclination to speak or to utter ideas. Blocking is, moreover, very apt to lead to elisions, in the sense that if one path is not open the train of thought flows into another path. Not only individual ideas but entire complexes may be barred or split off.

As to the *content of thinking*, he puts *delusions* and *hallucinations* side by side, and justly so. They represent wishes, or the delusions of persecutions, often represent the opposing forces, that is to say, that which forms an opposition to the fulfillment of the wishes if formulated or projected as persecution. He then gives a great many examples of delusion and hallucination formation entirely on the ground of Freudian mechanisms. Ideas of infidelity he explains as due to antagonism towards wife or husband. He also mentions homosexuality, but with more reserve than Freud and Ferenczi. Children are usually identified with the husband, hence the child may die, as well as the husband, in the imagination of the patient. Among the sexual symbols, he mentions knives, revolvers, needles, animals such as horses, bulls, cats, dogs, etc. He mentions murder as a coitus symbol, also burning and being in hell. The mouth and eyes often stand for vagina. The lover is represented as God, saint, or devil. Urination may stand for orgasm, defecation for birth. Substitutions may play an important rôle, and may make the interpretation difficult, and such a difficulty in interpretation may also be caused by the fact that a gradual metamorphosis may take place which makes the original source of the delusion or hallucination difficult to obtain. I will mention only one example, that of a woman who thought she was a ram. This Bleuler traced back to her love for a clergyman. As frequently is the case,

her lover was first represented as God, then as Christ, and finally as the lamb, whereupon the idea of the ram became clear. It is almost wicked to treat this part of the book so briefly, but I would take too much space if I were to go into it more thoroughly.

What Bleuler says of *affectivity* is very interesting, and corresponds to what he has stated in his excellent little book on "Affectivity, Suggestibility, Paranoia."* So far as the description of the affective changes is concerned, he states that while many chronic patients show profound apathy, others are apathetic chiefly towards higher interests. In mild cases the affective disorder may be masked, because the patients may have normal affects in certain directions. This is seen in the world improvers, the prophets, and the like. Some cases may show lability, but without depth. The special features which characterize the manic-depressive syndromes in dementia præcox we have already spoken of. Irritability is frequently retained, even parental love, or compassion; or the artistic feeling may be relatively good in some cases; but the feelings which regulate the relations with others, such as shame, ethical feelings, are apt to suffer early. He mentions a woman who was rather better after a catatonic attack, and this improvement was due to the fact that she was less altruistic, and therefore more comfortable. He also describes under this heading of the affects, the fact that the feelings often do not correspond with the ideas, that there may be a remarkable apathy towards delusions or hallucinations, that there is no unity of ideas and the manifestations of the affect, and that the manifestations of the affects themselves may be disharmonious. His well-known theory of ambivalence should be mentioned also. Every desire or impulse is closely associated with its opposite, every thought has two contrasting feelings associated with it, which normally are fused according to the greater value. In dementia præcox this tendency has greater sway, and in part explains negativism, suggestibility, and many of the bizarreries.

* English translation by Dr. Ch. Ricksher. N. Y. STATE HOSPITALS BULLETIN, Vol. IV, No. 4; also obtainable in reprint form.

Bleuler's claim that the affective disorders are not primary but secondary, is a very important conception which has met and undoubtedly will meet with considerable opposition; yet he has good arguments on his side. In the first place, he shows that when the complexes are touched, the feelings can be brought out in normal intensity, that is to say, when we are able to force the patient to think of his complexes, his entire affective attitude changes and becomes much more normal. I am convinced of the truth of this observation, for any one, in studying dementia præcox cases who are at all accessible, must have noticed the remarkable changes in the attitude of the patient which occur during an interview when his symptoms and his complexes are talked over with him.

Bleuler also mentions in this connection the cases which are apparently apathetic and yet get well, that is, the so-called late recoveries; and he claims that when late in life a senile deterioration is added to the dementia præcox, the patients become affectively more natural and more accessible. Moreover, in the milder cases, not all the affects have disappeared, and the disappearance of that which has gone can be explained psychogenetically. This remarkable splitting off of the affects, or whatever we may call it, he tries to make comprehensible in the following manner: He first points out that we can not explain these affective disorders on the ground of a diffuse lowering of affectivity, because it is too irregular, nor reduce it to the intellectual disorder alone. We know from normal psychology, as well as from psychology of hysteria, that affects which are difficult to bear may be inhibited or repressed. Indeed, in pre-occupation with an affective experience we may find repression not only of the affective experience, but a certain amount of general indifference, that is, an inhibition of affects in general. It will be remembered that Jung spoke of the "belle indifference" of the hystericals, something which, by the way, we may see in ourselves in regard to some of our complexes. Yet such split off affects are not lost, and may give rise to certain bodily manifestations in spite of the fact that they are not conscious. We

see this in the association experiments, in the psychogalvanic phenomena; and in dementia præcox very often in the peculiar smiles and blushes. Bleuler thinks that such normal tendencies have a much greater sway in dementia præcox, owing to the association disorder which he looks upon as a fundamental defect. Of course autism also favors it. That which has often been spoken of as the disharmony between affective and intellectual content is explained on the ground that the manifest intellectual content, as in dreams, very often stands for something else, or that which is represented in consciousness as a fear, for example, is in reality a wish. I remember a woman who, now with peculiar forced apprehensiveness, now with a smile, insisted that her husband was being tortured downstairs. This incongruous affective attitude became much more comprehensible when we knew that one trend of her personality was a strong desire to get rid of her husband. Similarly the peculiar mixture of affective expressions, sometimes seen in dementia præcox, can be explained by the fact that contrasting affects run side by side without fusion, as would be the case in the normal.

A difficult subject is *autism*. By autism Bleuler means that which we have called the shut-in tendency, the more or less complete shutting out of the environment, or, at any rate, all that which does not correspond to the wishes. It may be so marked that the patients even shut out all sensory impressions, close their eyes and ears, make their body as small as possible by crouching. Bleuler regards this autism as a secondary phenomenon, and looks upon it as one of the results of his association disorder, whereas the autistic thinking is the day dreaming, the thinking without reference to reality. This autistic thinking flourishes in schizophrenia. The normal person includes in his logical operations more or less everything of his experience, past and present, which has a bearing, irrespective of its emotional value. Bleuler thinks that the schizophrenic defect in logic makes the exclusion of a great many external and internal facts possible, and thus gives sway to a tendency which we all have, namely, to live in fancies which suit us,

something which we indulge in but do not allow to influence our conduct, but which in the schizophrenic assumes the value of reality. As we have said, it seems difficult to prove that such autistic tendencies have to be explained on the ground of the association disorder. We know that they exist frequently for a long time before any other symptoms appear, so far as we can tell. We know that boys with moderately pronounced tendencies of this sort may still be very good at school, or in the simple deteriorations, it is difficult to demonstrate an association disorder. Therefore, we can say that, at any rate, the two alterations do not go hand in hand. Hence the autism would seem to be something more fundamental. But in my opinion it is something which depends upon a congenital tendency, more or less marked, so that it manifests itself earlier or later. It has always seemed to me that it was this tendency to autism which, when marked, gave rise to the poor prognosis in the typical dementia præcox cases. From this point of view, then, we would be dealing not with the primary association disorder, which gives rise to the autism, but the autism would be the primary tendency which allows mechanisms, otherwise not so serious, to assume a much greater degree of intensity and persistency. But, of course, this whole attitude is entirely different from Bleuler's conception.

In continuing our description of symptoms, we come to the question of negativism, stupor, catalepsy, mannerisms, stereotypies.

Negativism is difficult to explain and we are hardly far enough to derive it from one simple disorder. But Bleuler adduces a good deal which is of interest in this connection. In the first place, he points to what he calls ambivalence, that is to say, the fact that every impulse is closely associated with its opposite, as a principle which makes negativism less incomprehensible. The general autistic tendencies are naturally also favorable for the development of negativism, but also a certain sensitiveness and instinctive desire on the part of the patient to protect himself against actual and possible irritation of his mental wounds,

so to speak; also a rather natural opposition against the more or less hostile attitude of the environment, and very likely, not infrequently, a certain difficulty in thinking and acting. That suggestibility and negativism should be associated with each other, we know from other conditions; we find it in children, hystericals, and seniles. It is as if the suggestibility led to a protective warding off. The action of complexes accounts for the fact that negativism is very often topical, and then is called into play more particularly in situations which are connected with such complexes.

Stupor may be produced in various ways. In the first place, by cerebral torpor (according to Bleuler, an exacerbation of the disease process). Secondly, some general reductions of activity or some more or less pronounced conditions of inhibition of mental activity are explained as generalized blocking, because it can be seen at times to develop out of a more topical disorder of this sort, and Bleuler likens this to the so-called emotive stupor sometimes seen in normal individuals; at the same time the tendency to stereotypy of impulses, and what Bleuler speaks of as the tendency to generalization in dementia præcox, as well as the lack of interest and the difficulty in mental operations, may also contribute to the full development of this reduction. Of course blocking and negativism here run together. Stupor-like states may also be produced by numerous hallucinations, which through exclusion of the outside world reduce activity. He also mentions retardation of the type seen in manic-depressive insanity, and suggests the possibility that conditions may exist in which motility is excluded very much in the same way as it is in sleep.

Catalepsy, again, is difficult to explain. However, Bleuler mentions the undoubted fact that with a great dearth of ideas, it is not infrequently seen even in organic psychoses, or something like it occurs to all of us when we are absorbed. In pronounced cases of catalepsy, the spontaneous movements may cease or may be retarded so that we have conditions which in many ways resemble manic-

depressive retardation. It seems to me very valuable that here more mechanisms accounting for reduction of activity are suggested than are usually assumed.

The *catatonic excitements*, that is, the motility psychosis of Wernicke, he claims, can always be psychologically explained, and he denies the existence of real choreic movements, and regards such explanations as those of Kleist as forced, just as he expresses his inability to accept the sensory origin of catatonic movements for the simple reason that we have no evidence of any sensory disorders.

Automatisms are put on the same level as hallucinations, that is to say, are looked upon as intrusions into consciousness of split-off complexes, whereas mannerisms are essentially the same as Freud's *Symptomhandlungen*.

I will not go into more extensive description of Bleuler's analysis of other symptoms. Suffice it to say that Bleuler, who has investigated a great many cases, claims that a great deal in the symptom picture can be explained by psychoanalysis, and that that part of the symptomatology which is the most obvious is perhaps wholly the expression of a more or less successful attempt to escape difficult situations, hence psychogenetically explicable.

Something should be added in regard to the *course* of the disorder. Irregularity in the course is the most common; characteristic is only the tendency to deterioration. Delirious conditions do well. We know of no acute condition which need deteriorate. Mild cases may not get worse for years. Former recoveries argue for later recoveries. Patients who develop paranoic states after thirty are apt not to deteriorate in their behavior. Very acute syndromes, with periodical repetitions, do badly. Hallucinations and delusions in acute states are prognostically not necessarily bad; even after some years, a relative recovery may take place. On the other hand, marked scattering of ideation is a bad sign, as are senseless stereotypies and the combination of negativism with apathy, &c.

In this somewhat cursory review of the valuable work of over four hundred pages, I had to limit myself to the more important facts. In conclusion I wish to say: Bleuler has

described all the symptoms which Kræpelin has mentioned in his *dementia præcox*, and has consistently included such symptoms, even in their milder degrees, whenever they occur, &c. We must not forget that his description comprises very much of the symptomatology of the functional psychoses, practically everything with the exception of the pure manic-depressive symptoms. There exists, undoubtedly, a great difficulty in drawing a line anywhere by saying here are symptoms which are fundamentally different from the rest. (To quite an extent they correspond to what we have been in the habit of calling trend mechanisms). Take for example the prison psychoses, the hysterical psychoses, the impure feature in certain manic-depressive states. It is difficult to say that the mechanisms are not the same as in *dementia præcox*. But Bleuler goes further. He says when these symptoms occur they belong to a more or less definite disease process. He claims they are symptoms which occur nowhere else, and that, moreover, the course is the same in all cases who present such symptoms, and different from the other disorders, because whenever they occur, the outlook is more serious, not in the sense that marked deterioration occurs, but that there is always some defect left. We have shown that some of the defects we would attribute to defects in make-up. This connection of definite symptoms and essential similarity in outcome, a conception which with Bleuler is wider than with Kræpelin, leads him, as well as Kræpelin, to the assumption of a definite disease process. This he attributes to a poison, and assumes primary symptoms as the direct outcome of the disease process. These primary symptoms, which, as we have seen, are not on a very firm foundation, represent the basis on which extensive psychogenic mechanisms can take place. But, as he admits himself, there is very little parallelism between disease process and symptoms and it does not seem to me that the proof is very strong that all symptoms *can not* be psychologically explained in the face of so much that he himself has thus referred to purely psychogenic mechanisms, nor that the constitutional abnormalities are not responsi-

ble for a great deal in the symptomatology and development of the disease.

In emphasizing the psychogenic interpretation of dementia præcox even more than Bleuler does, we are, of course, well aware that there is a physical side to this disorder. If we assume, as we do, that dementia præcox is essentially a disorder of instincts, it is self-evident that a very important component of the mechanisms of dementia præcox must be physical, be this now in the form of vasomotor changes, abnormalities of internal secretion, or other metabolism disorders; but we know very little of these, whereas we can see in a general way a sequence of mental events so that we can, at least to a certain extent, describe what occurs in *mental terms*. It would seem, nevertheless, justifiable to speak of psychogenesis, because it seems that the connection of the mental and the physical is here different from what it is in the organic disorders.

Another point in which we would differ from Bleuler is this: We question whether it is advisable to assume a circumscribed primary disease process unless we take the concept of disease process in a much wider sense than is customary. We are inclined rather, somewhat in the same way as Adolf Meyer does, to look upon the symptom pictures of these functional psychoses as *reactions* of individuals, reactions which differ in different individuals according to the mental make-up, the importance and deep-seatedness of the conflicts, and perhaps other features. We, therefore, expect that similar mechanisms should occur in conditions which are otherwise dissimilar. We expect, for example, that manic-depressive and dementia præcox reactions, if we may inconsistently use this term in this connection, may be combined, that transitions occur—and we feel the necessity of sizing up our clinical pictures according to the different values which we give to the different features and factors which enter into the clinical picture. It is for this reason that we urge the making of smaller groups with special combinations of traits, special etiological constellations, &c., because the usual diagnosis only imperfectly expresses the real situation, since in all

probability these diagnoses only represent groups of cases which are similar enough so far as their centre is concerned, but shade off into each other when we come to the periphery of the groups. It would seem to us, therefore, rather unfortunate if this book of Bleuler, although one can not say enough of its value as a help in symptom-analyses, would lead us to widen the group of dementia præcox still further. Before we allow ourselves to be influenced in this way, we should make it clear to ourselves what our standpoint is. We can not have the one of which we have just spoken, and diagnosticate dementia præcox as Bleuler does. On the other hand, we can not have Bleuler's standpoint and diagnosticate, for example, an impure manic state as allied to manic-depressive insanity as we do here, since Meyer has introduced this term, because that presupposes a totally different psychiatric standpoint. Whether we are right or whether those who speak of circumscribed diseases or disease process are right, or how much of a compromise is possible, is perhaps as yet an open question, but as a working hypothesis, at any rate, it would seem that our present way is the more open one.

THE RELATION OF MANIC-DEPRESSIVE INSANITY TO INFECTIVE-EXHAUSTIVE PSYCHOSES.

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My object in presenting this review is to determine whether or not we can discover in cases, which show essentially manic-depressive symptoms, features which can be attributed to infective or exhaustive influences. Therefore, I will consider cases which arise following some infective disorder, particularly during the puerperium, or after loss of blood, or in connection with some debilitating physical condition.

Kræpelin describes delirium in manic-depressive insanity, for which he gives no infective-exhaustive etiology. On the other hand he points out that in his collapse delirium, manic features are often present and, he, himself, calls attention to the similarity of these two conditions. The differential diagnosis he makes on the fact that collapse delirium follows exhaustive causes and shows a more profound apprehension disorder and more lively hallucinations.

In his eighth edition, he, appreciating the difficulties, expresses the opinion that the different forms of infective-exhaustive disorders, can not be circumscribed from one another, or from other disease pictures, but feels that further study will enable us to make the distinction.

The question as to whether or not the cases about to be considered differ from true manic attacks, uncomplicated by infective-exhaustive influences, is also to be raised, for upon this perhaps depends our prognosis for future attacks.

The first group I wish to take up is made up of cases which show quite clear manic states, but which followed infective-exhaustive causes:

GROUP I.

CASE A. E. S. Age 24. No heredity. Stable makeup. No former attacks. Primipara. May 26, 1909, normal labor; out of bed on the seventh day. On the eleventh day high fever, accompanying suppurative mastitis. On the fourteenth day she became acutely excited. "Was out of her mind and talked considerably." Four days later her breast was operated upon; she appeared somewhat better, but began to make faces; said New York was turning over. "Here is God and I speak to Him." She laughed, sang and had to be held on the bed.

On admission to the Manhattan State Hospital, June 23, 1909, two weeks after the onset, temperature 100.6°, pulse 94; abscess of breast; she showed exhaustion from restlessness.

She was flighty, distractible and elated. Said: "Polly English—Irish—come here—1, 2, 3—Marconi—lie down—ask him what language he talks—speak English—this is my birthday—Moscow—Caruso—Madamoiselle—so—so—papa said 'come here'—speak English—look—Christian nationality." She commented on things that she saw and heard. Owing to lack of co-operation, orientation was not determined. Improvement was gradual accompanied by typical hypomanic traits.

September 10, 1907. She was convalescent. She stated that during her illness she felt happy, but at times had felt badly. She was fairly clear for past events, even the early part of her psychosis. She showed good insight and her recovery was complete in three months. (Duration three months, one day.)

CASE B. D. A. Age 21. A sister "melancholy." In makeup described as being rather "giddy and wild." No previous attacks. Never before pregnant. July 11, 1908, a criminal abortion was performed and "blood poisoning" is said to have followed. She then became acutely excited and mistook the identity of those about her.

On admission to Manhattan State Hospital, July 29, 1908, temperature 99.4°, pulse 90, respiration 18; she was pale and anemic.

She was flighty and distractible; mood one of mild elation; she showed pronounced manic traits; spontaneously said: "I don't want to marry you—now you have money and I'm going to marry you—I am on the bum, bum, bum—I'm from Paris—now you know what I am—you've got \$2—no money—so you are going to marry me—some puny—money—no lemonade—no soda water—no ice cream—now you know you can give me a drink." Orientation could not be determined.

In September she became quieter, but as recovery took place she presented an elated mood and mild manic traits. Was found to have a clear recollection for the whole attack.

March 13, 1909, she was discharged recovered. (Duration eight months, two days.)

CASE C. R. H., with even more severe etiological factors, may also be included in this group. Age 26. Mother was of an excitable disposition; patient however, described as even-tempered and cheerful. No former attacks. Fourth childbirth, October 3, 1907. Severe hemorrhages followed. She felt nervous and run down. Was worried because her mother did not come to see her. She was up on the sixth day, walked some distance on the ninth, but was restless and troubled with insomnia.

October 13, 1907, she became acutely excited. Said she was alive in the head, but dead in the feet. "Half of me is here and half of me is at home—my head is at home—I made a joke of you people—I got out from your house."

On admission to Manhattan State Hospital, October 19, 1907, she was fairly well nourished; temperature 99.2°, pulse, 80, respiration 19.

Mentally, she presented a frank manic condition—flighty, distractible and exhilarated. She was very restless and disturbed, said she felt splendid and was very productive. "Explain to the army officer if he could not explain to the typewriter (hearing the same)—perfect—through the heart—nature's own cure—to be the cause is my cure—to be the age of a father—no, no, as a father to my child—what would he look like—about 110 years old—gone—forgotten—dead—forgotten—G.—d.—hell." She gave the place as the Harlem State Hospital, again said it was Bellevue; the day she mentioned correctly. There were no definite evidences of hallucinations.

Again, as improvement took place, it was observed that manic tendencies of a milder nature, were often shown. Aside from being a little doubtful as to how she came to the hospital, her memory was quite good. She gained very good insight into her condition and May 14, 1908, was recovered. (Duration seven months, one day.)

In only one of the foregoing cases was there evidences of a manic makeup. None ever had a former attack. The onset was acute following infection in two cases, and an exhaustive factor in the third. In all there was little suggestive of early hallucinatory confusion. As recovery took place, there was a gradual tapering off as it were of manic symptoms and the patients were found to have a good memory for the period of the psychosis itself.

GROUP II.

I will now take up groups of cases, showing delirious admixtures. The first case is an individual who as the result of infection, developed a rather typical manic condition, but with an increase in severity of her physical state,

presented a delirious admixture, not however, relinquishing all manic traits.

CASE A. M. M. Age 20. Heredity, negative for two generations. No previous attacks. Normal, stable makeup. Primipara.

During pregnancy she felt weak and run down and was greatly troubled with nausea and vomiting. February 22, 1911, was confined, being attended by a midwife. The following day she had fever which continued and on February 24, 1911, she abruptly became excited and irrational and four days later she was taken to Bellevue Hospital, where she talked, shouted and sang constantly.

March 16, 1911, when admitted to Manhattan State Hospital, her cheeks were flushed; temperature 101.5° , pulse 130, respiration 38. There was slight dullness and roughened breathing at apex of right lung; abdomen was distended; uterus was tender and palpable; sub-involuted. There was a median laceration of perineum and a bilateral tear of cervix, which was soft, boggy and dilated. From it was oozing a profuse muco-purulent discharge. Albumen, pus, epithelial and blood cells in urine. She was greatly prostrated.

The patient spoke constantly in a happy strain; was rambling, flighty, distractible, elated and playful, presenting a marked manic state. While she occasionally mistook the identity of those about her, she was approximately oriented for time and knew that she was in a hospital. She was somewhat hazy for the immediate past, but realized that she became ill after the birth of her child.

Smears from vaginal discharge and repeated blood cultures showed the presence of streptococci; there was a leucocytosis of 34,000.

During the first two days of her residence, temperature rose to 105° and 106° . Manic traits, however, continued during the fever. She was distractible. Said: "Please, doctor, don't look so sober—won't you do something for me father. To-day is my birthday (approximately correct)—look at the beautiful sun (streaming through window)—hear the little birdies sing (canary in cage)—Mother, won't you help me—(nurse); please come here and see all the nice people" (referring to other patients). Her mood was a little variable, but for the most part she was happy and quite exhilarated, singing and commenting on her surroundings. Hallucinations were not present. There was no clouding of the sensorium. She readily recognized her relatives and conversed with them.

Great difficulty was experienced in overcoming the intestinal paresis, but under appropriate treatment, this condition was finally relieved; this was coincident with intravenous injections of anti-streptococcus serum, which was administered on many occasions with a resulting fall of temperature.

On the evening of March 10, her temperature reached 106.6° , pulse 160, respiration 36. She now became quite comatose, but later

rallied and on the following day she was happy, singing and joking, pert and flippant; occasionally a little irritable, petulant and childlike.

She continued to show a decided septic temperature curve, marked by morning remission and evening exacerbation.

March 13, 1912, she began to exhibit delirious features. She called the ward physician "Father D." Dr. D. she addressed as "Joe the Foreman." She spoke of a terrible time during the night—"there had been a big fire." She became more quiet, dozed most of the time—had several severe chills—failed physically. She now began to hallucinate: she saw dead people and evil spirits—voices cursed her and even maligned her sister. Her mood became more irritable; often she was fearful and depressed, but still there were times when she appeared mildly elated and would sing brightly. Temperature ranged from 101° to 104°. Voices called her bad names—bugs crawled over her face. Often at night she had visions of a graveyard. Throughout this period however, she continued to give the month and year correctly, but was often doubtful as to the day and place and misidentified those about her constantly.

For many days the patient remained in a very precarious physical condition, but during the middle of April she began to show improvement both physically and mentally. Her mood became more stable, she no longer misidentified or reacted to hallucinations. The fever continued, often reaching 104°, pulse varying between 120 and 130. She emerged quite abruptly from the delirium without recurrence of the manic traits.

On May 19, 1911, she was found to possess excellent insight into her condition and gave a very good account of her previous hallucinatory experiences. She remembered that during her excitement she thought the picture of St. Anthony on the wall began to move. She recalled being taken away from her home in an ambulance and that she was singing all the way. She remembered being in Bellevue Hospital, but knew nothing of her trip to Ward's Island, but did have a faint recollection of her entrance and the admission ward.

She recalls during the delirious phase of her psychosis, she had often heard threatening voices and that she had felt afraid; frequently she had imagined that she was in a cemetery; she had not always realized that she was in a hospital.

The patient showed a gradual physical improvement; the fever finally subsided and when first allowed up June 5th, she was found to weigh 105½ pounds. Her improvement continued and at the time of her discharge August 15, 1911, her weight had increased to 130 pounds. She got along well outside of the hospital and continued to gain in weight, September 17, 1911, weighing 145 pounds, 20 pounds more than she had ever weighed in her life. (Duration two months, twenty-five days.)

Summary. This case then shows that following infection and

fever, patient became acutely excited, presented a fairly typical manic state and later parallel with increase in severity of physical condition she reacted to many hallucinations and was of a more fearful and irritable mood. While she frequently misidentified persons and was often doubtful as to the day and place, she gave the month and year correctly. Occasionally she still displayed a few manic traits. She then made a rather abrupt recovery and, retrospectively, was found to be clouded for only brief periods of the attack; following the attack there was a marked increase in weight.

The following case presents a somewhat different situation. Here, following infection, a delirium-like condition, with only slight clouding of the sensorium, ushers in a manic state.

CASE B. G. H. Age 21. Of a bright, cheerful disposition, but as far as could be learned she was free from fluctuations of mood. No former attacks. Primipara. Prolonged labor July 25, 1907. Fourth day following, chills and fever; fifth day, curettage; sixth day, blood clots were removed and uterus was packed. She then became delirious, spoke of dying—thought the doctor was trying to kill her; was restless, rambling and confused. Said: "No, I won't sleep because God is caring for me—all good people live—I want to go to Heaven—suffer—all devils suffer—save me—my heart is still beating—the devil put a piece in me."

On admission, August 7, 1907, temperature 100.2°. Weight 98½ pounds.

She was confused as to what had happened just prior to her leaving home and was unclear regarding the early part of her stay at Bellevue Hospital. She heard voices outside the examining room and remarked: "Oh, they are still calling me—they are still torturing me." Often she would drift into a reminiscent description of her previous dream-like experiences. She realized that her mind was confused—"a little bit off," but she thought she was getting better. Orientation approximately correct. She referred to wicked people she had seen and thought that she had been poisoned. Her mood was apprehensive. She misidentified persons—asked to be saved—was afraid she was to be burned alive—spoke of bad visions from a bad place. Later she became very apprehensive and fearful—thought that worms and snakes were about her and that she was being tortured.

Early in September she began to show manic traits—was easily amused and in a playful way said: "Did you want to hear my troubles? Well, first about my feet . . . I have corns in the Corn Exchange Bank. Did you find the gold I lost?" She was very voluble and laughed at any trivial circumstance. Given a pad she

wrote: "Navy Yard—Special Pass—Drugstore—Wedding Ring—Old Shoes." (Looking at same).

Gradually she showed improvement, but was mildly elated at times; again she was somewhat depressed and complaining. Throughout convalescent period there was no deep confusion, she showed only haziness of memory preceding and following her admission to Bellevue and for brief periods after her entrance to Manhattan State Hospital.

December 16, 1907, recovered. Weight 125 pounds. (Duration four months, fifteen days.)

Summary. In this case with a definite infective-exhaustive etiology, patient first became somewhat delirious. She reacted to numerous hallucinations of sight and hearing; referred to being tortured and poisoned and, although somewhat hazy for events in the first period of the psychosis, she retained a fair grasp and presented an apprehensive and fearful mood. After a month she passed into a manic state, from which she made a good recovery, exhibiting then only a slight haziness for the early part of her attack.

The third case in this group is a somewhat similar one. Following retained placenta and much loss of blood, we first have hallucinations with a delirium-like condition, followed by an essentially manic state.

CASE C. M. R. Age 25. Heredity negative for two generations. Stable makeup. Second child. No former attacks. Normal labor March 5, 1909. Nine days later curettage for retained placenta; is said to have lost much blood; temperature at this time not known. A day or two following, she became acutely excited, cried, was suspicious; misidentified people and surroundings, and reacted to vivid auditory and visional hallucinations; those of taste and smell were also considered to be present.

On admission to Manhattan State Hospital, March 20, 1909, temperature 100°, pulse 110, respiration 30. Blood count: reds, 3,000,000, whites, 10,400; hemaglobin, 60 per cent.

She was distractible, playful and flighty; variable mood; motor unrest only moderate. She was clear as to surroundings and time orientation was approximately correct. She then gave a good account of former delirious experiences. Remembered leaving home and being taken to the hospital. While there the hospital seem to turn into a church—the place was hung in mourning—she imagined that she heard carriages outside and it was a funeral; then two doors swung back and forth—on one was the skeleton of a leg and an arm—upon the other the head of her great-grandfather; these swung back and forth as the door moved—people came in and out of these doors. She saw a policeman's club and a man's beard hanging on the wall—there were peculiar figures in the next bed—she heard people calling

and the echo. Again she thought that she was in a long hall and that there were people dressed up like kings and that they were trying to pull a grave along with them. She imagined that she saw dead people under the bed. Even in this hospital at first she thought she heard her husband's voice and that there was electricity in her body. Nevertheless, for the most part her mood was one of elation.

On March 25, she presented a different picture: She became very excited and loquacious. When asked why she had been sent to Bellevue she said: "Bellevue—Hellvue—eyeview—if I send you to stop and drink (drinking water from the tub and squirting it about)—eyeview—Fellvue." When asked what had been the trouble she went on: "I can't just explain—me to right the wrong and wrong the right—and if I view and swim view (making swimming motions with body) and ding view and is going all right." She played with her hands and smiled, whistled and laughed; was good natured and playful. When asked if she was afraid, she responded, "Not a bit." She then sang "I'm afraid to go home in the dark."

She continued to show manic traits. On June 7, she became assaultive, boisterous and quarrelsome; misidentified surroundings and persons. Three weeks later she showed rapid improvement and gained good insight. She thought that at the time of her confinement her physical health was very poor. She often had severe headaches and was unable to sleep at night. She did not remember leaving home, but recalled being in an ambulance and going to the Harlem Hospital. She did not know how long she was there or how she got to Bellevue, but recalled being in the latter institution and gave a fair account of her trip to Ward's Island. There did not appear to be any definite circumscribed amnesic period, rather, it appeared that there were certain lapses of memory for brief periods, which were not very clear cut. On August 14, 1909, she was discharged as recovered. (Duration five months).

Summary. In this case with a definite exhaustive factor, the patient became acutely excited and reacted to many fantastic dream-like hallucinations, of which she later gave a retrospective account, when she was found to be approximately oriented and fairly clear as to events in the early part of the attack. During the first few days in the hospital she reacted to hallucinations, but about eleven days after onset of the psychosis, she passed into a manic phase, from which she recovered without any definite amnesia.

Summary of Group II. None of the three cases in this group as far as we are able to ascertain, ever showed any evidences of a manic makeup; there were no former attacks. The mental symptoms were displayed only following infection in two cases and an exhaustive factor in the third. In all three cases, infective-exhaustive etiology

seems to have brought about some clouding of the sensorium with numerous hallucinations, either in the beginning, or as in the first case, when the infection became more marked, delirious features cropped out. The duration of all was remarkably short: the first case less than three months; the second approximately four months; the third approximately five months.

GROUP III.

The case in this group showed very little of an early hallucinatory trend. Later, however, she passed through a manic phase, and on recovery was found to be very amnesic.

CASE A. J. H. Age 27. Heredity negative for two generations. Normal makeup. No former attacks. Second child October 11, 1909. Instrumental delivery. October 24, 1909, acutely excited; talked in a rambling, disconnected way about religion. Claimed that she was the Lord. Her temperature at this time was 102.2°. She continued disturbed, but occasionally had quiet intervals.

At Bellevue she showed general exhaustion and puerperal infection. Said: "I am the Lord God—send me the word—I am the way—give me the light for I am Christ the Savior."

On admission to Manhattan State Hospital, November 2, 1909, temperature 102.2°, pulse 106, respiration 26.

She was spontaneous, flighty and distractible. There were word and sound association. She made many rhymes; showed well-marked manic tendencies; was playful and elated. "Fishermen always come in blue—the Coney Island Jew—Mrs. Jack raise him up—Jack at the door—now it is open—now it is shut." (Pen shown): "That's a pencil—you swiped it—don't let anyone know though." Hallucinations were not demonstrated. Orientation and grasp on recent past not determined owing to lack of co-operation.

After nine days hospital residence, she showed a rather abrupt improvement; was found to present a definite circumscribed amnesia for the greater portion of the attack. She knew nothing of leaving home, of having been in Bellevue or of her admission to this hospital. As she expressed it: "I woke up one day and found myself in a hospital," which worried and alarmed her considerably. She remembered becoming excited, but retrospectively it all seemed confused to her. She had imagined that a saint was in her room—that her little girl was Christ. The next thing she was able to recollect was the physician speaking to her November 11, 1909. She gained between

30 and 40 pounds in weight and was discharged recovered December 19, 1909. (Duration one month, twenty-five days.)

Summary. In this case we apparently have an acute excitement following infection, in which there were a few early hallucinations and peculiar talk about being the Lord. Here, she showed essentially a manic reaction; hallucinations were not demonstrated and, owing to lack of co-operation, orientation was not determined. The most striking facts in the case appear to be such pronounced amnesia and her gain in weight.

GROUP IV.

The fourth group consists of less clear cases who have, however, also manic features with delirious admixture.

The first case developed acutely after exhaustive causes and presented essentially a manic condition. On recovery she was found to be somewhat hazy for the past and related many hallucinations.

CASE A. A. W. Age 39. Heredity unascertained. Appears to have been of stable makeup.

During the winter of 1908 her husband was out of work. They were in extreme financial straits. She washed, ironed, carried home coal from the railroad tracks; was up at 4 A. M. and would go out for a day's work whenever the opportunity presented. She worried some over a minor theft she had committed in September, 1908. Slept poorly and had but little appetite. She continued in reduced physical health and, abruptly, on May 29, 1909, became acutely excited.

On admission May 31, 1909, temperature 100°, pulse 88, respiration 26. She was too disturbed to permit of a complete physical examination.

Mentally, she was over-productive, emotionally elevated, flighty and distractible; quite pert and sharp in her replies. When asked if she were happy she said: "Happy Hooligan—sure." When asked the year, she replied: "Can't look in the book." She was quite incoherent and the degree of her orientation could not be determined.

June 29, 1909, an extremely hot day, and after having been quite excited, her temperature rose to 104°. She became quite feeble and appeared decidedly delirious. In a muttering way she said: "No, wait a moment—go on down—go one down—it's nice down there—he's going down—he's decent."

After a day or two her physical condition became better and in July and August there was pronounced mental improvement without manic traits. She was then found to be quite hazy for former events but gave an account of many past hallucinations. She remembered that one night she began to imagine that snakes were biting her—they

were big and little—she got tired of killing them—she was not afraid, only tired. She recalled that she went out on the street—was in an ambulance and two different hospitals, but was unable to go into a detailed account of her movements. She later recalled being in the continuous bath and still thought the snakes were eating and cutting her to pieces. She thought that may be she was afraid of the snakes and accounted for her excitement by saying that she wanted to get away. When told that her actions did not indicate fear or apprehension, she was unable to give any explanation other than that she thought the snakes were trying to get her and she was endeavoring to evade them.

She showed no manic residuals during the convalescent period, instead was fretted and worried and while not appreciating the seriousness of her illness, she gained quite good insight and on November 13, 1909, was discharged as fully recovered. (Duration five months, fifteen days.)

Summary. The case shows that following reduced physical health, privation and worry, patient acutely became excited and presented essentially a manic state; although on one occasion, coincident with a rise of temperature, she was thought to be somewhat delirious. She recovered after two months and retrospectively was found to be somewhat hazy for the early part of the attack, but she told of numerous hallucinatory experiences, and stated that she had felt afraid, while in reality she had appeared elated. The point in this case which, perhaps, should be emphasized, is that without infection, wholly, with an exhaustive etiology, patient showed some evidences of a delirious admixture.

The following case is even less clear:

CASE B. E. M. Age 36. Heredity negative for two generations. Unstable makeup. Was a delicate child and also seemed excitable, easily upset and given to periods of depression.

During former pregnancies, five in number, she occasionally had what she calls "hysterical spells" consisting of attacks of alternate laughter and tears: "Would laugh as hard as she had cried."

During the sixth pregnancy such attacks were more frequent. During the eighth month, she suffered from severe neuralgia and worried a good deal about her husband who was being slandered. She was restless and talked in a peculiar way for two weeks before childbirth, which was not attended by infection.

February 15, 1909, normal labor. A few days later she began to react to auditory and visual hallucinations. The content is not given. She seemed to have no fear and appeared quite contented. She became much excited; talked almost constantly. Said: "I'm going over the same procession—I have been over the same to-day—I bet she is—been three or four times getting me over—I would much rather prove that you couldn't sleep."

On admission, March 1, 1909: Poorly nourished; albumen in urine. Temperature, 99° to 100°; pulse 90; respiration 20.

She was not noisy, but as a rule quiet and orderly except when questioned by the examiner, when she became more or less restless. At times she would cover her head completely with the bed clothes or with her hands or shut her eyes. Frequently she looked away as if listening to some one and would utter an irrelevant sentence or two, sometimes smiling as if reacting to auditory hallucinations. Her expression and appearance were that of exhaustion following a severe illness; sometimes her mood changed to one of mild elation or amusement during the questioning. She made peculiar stereotyped movements with her hands, waving them about. She said: "Ten years married. The Catholic Church knows they gave us the damages. They know us by paying through me. I tell you, you have got to ring up Mrs. Falkner and Mr. Falkner; my life has been disturbed the same as theirs--there is plenty of things happened to me. They talk about my husband--they tell me what they don't say and I can tell you." Occasionally she would become quite restless and toss the pillows about. She said she heard plenty of voices, but would give no account. Once she confessed that she thought some one was trying to poison her from the taste of the food. Orientation appeared defective, especially in regard to time and place. She gave the place of her residence correctly and seemed to have an idea that she had been in a maternity hospital, but her information of time and exact sequence of events was not clear. She could not state how she came here or by whom she was attended. Data of personal identification were fairly good. Occasionally she was a little irritable and there was a slight degree of distractibility.

Four days after admission she began to show pronounced manic traits. She was then voluble, playful, elated, flighty and distractible. She sang and made rhymes. "Give me my teeth--give me my teeth--I want them at once too--see--humpty, dumpty on the wall--Dr. Woodruff--humpty, dumpty--ha, ha--has no other--I want my glory--I want no other--humpty, dumpty on the wall--ocean--again--I want my clothing first--samples--old samples--you are simple--simple samples--samples, you are a simple man--I want something to eat--now don't you ruin my eyesight--eh--did you brush them--I want them brushed--brush them I say--oysters--oysters--Oyster Bay." During this phase there was nothing to indicate hallucinations.

The day following this display, she appeared rather depressed and said little, but from this time on her improvement was marked. She became quiet, orderly and appreciative, but showed a circumscribed amnesia for the period intervening between February 14, 1909 and about March 16, 1909, there being a complete loss of memory for that time. She knew nothing about going to Bellevue or of her transfer here. As she afterwards described it, she found herself in the ward,

where she appeared quite worried and alarmed by her surroundings. Discharged September 30, 1909, recovered. (Duration seven months, twenty-nine days.)

Summary. In this case we have no infective etiology; the onset was before childbirth, while in reduced physical health. Here she showed albuminuria and appeared exhausted. Mentally she was in a state of partial disorientation, talking essentially of actual troubles that she had. At first manic features were not marked; later such traits became more prominent. Following this, there was abrupt recovery with deep amnesia for the greater portion of the attack.

The third case in this group is unusual in many respects. The exhaustive influences are not especially marked, the manic state is somewhat atypical and delirious features are not especially prominent. The duration is exceptionally long.

CASE C. M. H. Age 32. Heredity negative for two generations. No former attacks. Two previous labors. Stable makeup. June 12, 1908, normal labor, following which she felt nervous and fretful; worried about her other children. She nursed her infant, went up and down stairs a good deal, had little appetite and gradually lost weight.

The night before her acute upset, August 1, 1908, patient felt so tired and nervous that she could not sleep. At 4.30 A. M. she imagined that she saw her father who had been dead for years. She became excited and said: "Well, I see lots of things—it is terrible the trouble you can have, cursing and swearing—I can hear it all—it seems to come from jealousy—one says they are fighting to see who I am."

On admission, August 28, 1908, temperature 100.5°, pulse 80 to 90, respiration 22. Albumen in urine, also pus cells.

At first she was mute and resistive, later she answered a few questions. She was disoriented as to time and place and appeared to be quite clouded. Was depressed. She continued sullen, irritable and assaultive until early in November, 1908, when she became very productive and flighty. "Now, what are you going to do? (to stenographer about to take notes) I tell you it is wrong for you to do this—you have no right to take down all that in writing and send it to Herald Square to be sent all over the world. You call this a charitable institution—what charity?—you call this charity?—I don't want that down even in the blue book. My goodness they can't sign it unless I sign it. Now is that not enough?" (as stenographer paused). Again: "Mrs. Barry—the fine ladies dressed in fashion and riding in carriages along 5th Avenue and West 34th Street—the devil's own work, I say (becoming somewhat excited). They can ride in carriages and go down to Macy's in Herald Square—to think that I am here with all kinds of people."

Her mood at this time was one of sullenness and irritability. There was nothing indicative of hallucinations. At intervals she became mildly elated and mischievous. Once when asked how she felt, she responded: "I'm feeling elegant—O. K.—how are you?" She gave the month and year correctly, and when urged as to whether or not she was sure, she said: "Am I sure—yes—I'm insured—I'm insured in five companies." She mentioned the place as "North Brothers' Island"—the worst place there was, where the worst cases went, and then impudently asked if the examiner were posing for his picture. She continued to be rather elated and flippant in her remarks, but her psychomotor unrest gradually diminished and September 27, 1909, she was regarded as convalescent; she was then found to be very amnesic for the attack. She knew nothing of having been in Bellevue or of her trip here; stated that she had a hazy recollection of having been in a continuous bath, which was months after her admission. She said that during the attack she felt sad. When told her mood was one indicative of elation, she merely answered that she did not know how she felt. On account of her disturbed condition she was not weighed on admission, but on recovery she was found to weigh ten pounds more than she had weighed at any time during the past twelve years. November 25, 1909, she was discharged recovered.

Summary. During the lactation period with exhaustive influences, patient became acutely excited and reacted to hallucinations and was somewhat clouded. Following this, for many months she appeared rather sullen and irritable, but was productive and even flighty and distractible at times. During the latter part of her attack, her mood became more typically manic—she was elated, playful, mischievous, pert and flippant. From this condition she emerged and was found to be amnesic for the attack. (Duration fifteen months, twenty-four days.)

In *conclusion* I would say that it appears that, aside from delirium with organic features, we do have hallucinatory trends with more or less clouding, about which we do not know whether they are endogenous or partial organic deliria; such trends, or I might say delirious phases, are evidently apt to occur with infective-exhaustive etiology. However, they also seem to come without it as in dementia præcox and hysteria.

But in connection with manic-depressive insanity, such hallucinatory trends with clouding or delirious admixtures, must be regarded as impure features, which here have been traced to infective-exhaustive etiology, without saying that similar impure features may not be produced otherwise.

Manic states and cases showing essentially manic features with such delirious admixtures referable to infective-exhaustive etiology, differ obviously in their cause and apparently in their mode of development and duration, from manic attacks of unknown etiology.

The initial symptoms of manic-depressive insanity, are frequently described as being characterized by a tendency for the individual to become unusually strenuous or show some excessive energy, seeking new fields of activity, such excitability being mental as well as motor; but here we find an onset quite different; in all of the cases with the exception perhaps of E. M., (Group IV, Case B) which was somewhat unclear, abrupt mental symptoms were displayed only following either a definite infective or exhaustive cause.

The duration of the attacks appears shorter than that which we usually expect to find in manic-depressive insanity, the average duration of nine cases being but five months and six days. It might be noted that the shortest duration of all was in the case showing the most severe infection—puerperal septicemia. Here the mental disorder was only two months and twenty-five days duration. (The longest duration was in case M. H., the last one cited, in which the entire attack presented many unusual features—duration fifteen months, twenty-four days).

The prognosis in these cases for future attacks is perhaps somewhat better than in cases of manic-depressive insanity of unknown or indefinite etiology, for none of the ten which have been considered ever had a former attack, only two showed evidences of a manic makeup and none, up to the present time, (*i. e.* three or more years in most cases) have showed evidence of recurrence.

MINUTES OF QUARTERLY CONFERENCE.

FEBRUARY 15, 1912.

Minutes of conference with State Hospital Superintendents and representatives with the State Commission in Lunacy, held at the Middletown State Homeopathic Hospital, February 15, 1912, at 12 m.

Present—

Commissioners MAY and SANGER.

Dr. AUGUST HOCH, Director of the Psychiatric Institute.

EVERETT S. ELWOOD, State Charities' Aid Association, New York City.

Utica State Hospital, HAROLD L. PALMER, M. D., Medical Superintendent.

Willard State Hospital, ROBERT M. ELLIOTT, M. D., Medical Superintendent.

Hudson River State Hospital, FREDERICK W. PARSONS, M. D., First Assistant Physician.

Middletown State Homeopathic Hospital, MAURICE C. ASHLEY, M. D., Medical Superintendent; ROBERT C. WOODMAN, M. D., First Assistant Physician; GEORGE F. BREWSTER, M. D., Second Assistant Physician; ARTHUR S. MOORE, M. D., HARRY V. BINGHAM, M. D., HARRY B. BALLOU, M. D., NELSON W. THOMPSON, M. D., Assistant Physicians; WILLIAM E. KELLY, M. D., Junior Physician; JULIA F. FISH, M. D., Woman Physician; E. S. BURDSALL, M. D., and HARRIET HORNER, M. D., Clinical Assistants.

Binghamton State Hospital, CHARLES G. WAGNER, M. D., Medical Superintendent.

St. Lawrence State Hospital, PAUL G. TADDIKEN, M. D., First Assistant Physician.

Rochester State Hospital, EUGENE H. HOWARD, M. D., Medical Superintendent.

Gowanda State Homeopathic Hospital, CLARENCE A. POTTER, M. D., First Assistant Physician.

Mohansic State Hospital, ISHAM G. HARRIS, M. D., Medical Superintendent.

Manhattan State Hospital, WILLIAM MABON, M. D., Superintendent and Medical Director.

Kings Park State Hospital, WM. AUSTIN MACY, M. D., Medical Superintendent, and AARON J. ROSANOFF, M. D., Second Assistant Physician.

Long Island State Hospital, E. M. SOMERS, M. D., Medical Superintendent.

Central Islip State Hospital, M. B. HEYMAN, M. D., First Assistant Physician.

Matteawan State Hospital, JOHN W. RUSSELL, M. D., Medical Superintendent.

Bloomington Hospital, WILLIAM L. RUSSELL, M. D., Medical Superintendent.

Managers—

WILLIAM H. ROGERS, Hon. HENRY BACON, Hon. M. N. KANE, and Mrs. JULIA M. CARY, Middletown State Homeopathic Hospital.

WILLIAM H. HECOX, Binghamton State Hospital.

WILLIAM D. GRANGER, M. D., Mohansic State Hospital.

GUSTAV SCHOLER, M. D., Manhattan State Hospital.

ALBERT E. KLEINERT, Kings Park State Hospital.

ROBERT HIBBARD, Central Islip State Hospital.

Commissioner MAY in the chair.

MR. CHAIRMAN: Much importance has been attached during the last few years to the study of the etiological factors concerned in the causation of insanity. Of these the more important, as you know, are alcohol, syphilis and heredity. Unfortunately, the statistical data which are prepared annually by the Commission in Lunacy are not as yet ready for the year ending September 30, 1911, owing to the delay, which has been unavoidable, in some of the institutions in returning the statistical data cards.

A study of the statistics for the year ending September 30, 1910, however, shows that alcoholism is the assigned cause in 25.7 per cent and a habit disorder in 34.3 per cent of the male cases admitted. Of the female first admissions, alcohol is given as the cause in 8.6 per cent and habit disorder in 11.4 per cent of the total admissions. The importance of syphilis as an etiological factor is shown by the fact that 17 per cent of the men admitted to the hospitals and 8.4 per cent of the women admitted out of a total of 7,066 patients for the year were cases of general paresis. Thirteen per cent of the total admissions, therefore, were cases of paresis, with as high a percentage as 23 at one of the institutions. The importance of these etiological factors is due to the fact that these are preventable diseases, and that is the reason for the efforts which have been made by the State Charities' Aid Association and other charitable organizations to disseminate this knowledge among the public.

The other great factor in the etiology of insanity is, of course, heredity. During the year mentioned, ending September 30, 1910, 27 per cent of the male cases in all institutions and 32 per cent of the female, a total of 30 per cent of the entire admissions, of which histories were obtainable, showed a distinct evidence of hereditary tendencies. The histories show that alcoholism was present in 30 per cent of the male admissions and 28 per cent of the females, making 29 per cent of the total number. In 49 per cent of the male, 54 per cent of the female, and 51 per cent of the total first admissions there was, therefore, a history of insanity, alcoholism or neuroses in the family. When we take into consideration the different psychoses, we find that 44 per cent of the cases of involutional melancholia, 36 per cent of the cases of dementia præcox, 40 per cent of the total number of cases of manic-depressive insanity, 38 per cent of the hysterical psychasthenic and neurasthenic psychoses, and 41 per cent of the cases of imbecility have a distinct history of heredity in the family. Aside from these figures, it has been shown that a family history of alcoholism, neuroses, etc., occurred in 46 per cent of the alcoholic psychoses. It is hardly necessary, therefore, to emphasize the importance of heredity in the consideration of the etiology of insanity. These figures show conclusively the desirability of entering into further studies of heredity, as has been done by some of the physicians connected with the State service, and for that reason I have asked Dr. Rosanoff to present a paper on this subject to-day.

ON THE INHERITANCE OF THE NEUROPATHIC CONSTITUTION.

BY A. J. ROSANOFF, M. D.,
Kings Park State Hospital, Kings Park, New York.

I.

The application of Mendel's theory in recent studies of heredity in feeble-mindedness,* epilepsy,† insanity,‡ and other neuropathic conditions,§ has furnished results which seem to justify the assumption that the full development and normal function of the mental faculties are dependent upon the presence in the germ plasm of a special determiner.

An individual may inherit this determiner from both parents, or only from one, or he may fail to inherit it from either parent. In the first case we would have an instance of *duplex inheritance*, in the second case one of *simplex inheritance*, and in the last case one of *nulliplex inheritance*.

In cases of duplex inheritance, that is to say, when the individual inherits the determiner for complete mental development from both parents, we find no abnormal mental traits, but, on the contrary, a most striking stability and a resistance to the severest strains imposed by environment.

In cases of simplex inheritance, that is to say, where the individual inherits the determiner for complete mental development from only one parent, there is as a rule, curiously enough, a similar mental stability: the normal mental disposition overshadows or conceals the neuropathic taint. In Mendelian terminology we would say, the normal disposition is a *dominant* trait and the neuropathic disposition is a *recessive* one. Individuals of simplex inheritance differ from those of duplex inheritance merely by the power which they have of transmitting under certain conditions the neuropathic constitution to their offspring.

In cases of nulliplex inheritance, that is to say, where the individual fails to inherit the determiner for complete mental development from either parent, we find arrests of development, epilepsy, insanity, or mental instability.

On the basis of these general principles it is possible to predict the proportions of the various types of offspring that would result from

* H. H. Goddard. *Heredity of Feeble-mindedness*. Bulletin No. 1, Eugenics Record Office, Cold Spring Harbor, N. Y., 1911.

† C. B. Davenport and D. F. Weeks. *A First Study of Inheritance of Epilepsy*. Journ. of Nerv. and Ment. Dis., 1911.

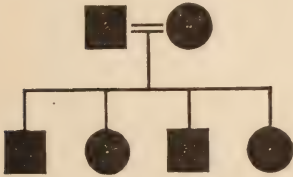
‡ A. J. Rosanoff and F. I. Orr. *A Study of Heredity in Insanity in the Light of the Mendelian Theory*. Amer. Journ. of Ins., Oct., 1911.

§ C. B. Davenport. *Heredity in Relation to Eugenics*. Henry Holt & Co., New York, 1911.

any combination of mates. The accompanying charts from I to VI, have been prepared to illustrate the various theoretically possible matings and their offspring. In these charts a square is used to represent a male subject and a circle a female subject; a plain square or circle represents a normal subject, a blackened one represents a neuropathic subject, and a half blackened one represents a normal subject of simplex inheritance.

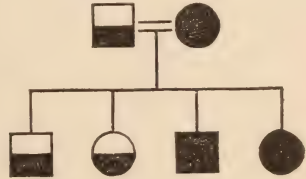
The matings illustrated in these charts are further represented by biological formulæ. In these formulæ the letter D indicates a dominant trait and the letter R a recessive trait. In the present connection a normal subject of duplex inheritance is accordingly represented by the symbol DD, one of simplex inheritance by DR, and a neuropathic subject, that is to say one of nulliplex inheritance, by RR.

CHART I.



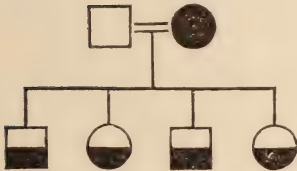
$$RR \times RR \infty RR.$$

CHART II.



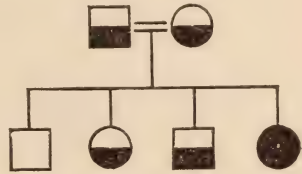
$$DR \times RR \infty DR + RR.$$

CHART III.



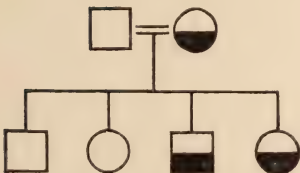
$$DD \times RR \infty DR.$$

CHART IV.



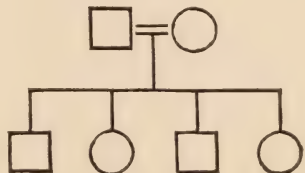
$$DR \times DR \infty DD + 2 DR + RR.$$

CHART V.



$$DD \times DR \infty DD + DR.$$

CHART VI.



$$DD \times DD \infty DD.$$

As these charts and formulæ show, expectation in accordance with the Mendelian theory is to be stated as follows:

1. Both parents being neuropathic, all children will be neuropathic.
2. One parent being normal, but with the neuropathic taint from one grandparent, and the other parent being neuropathic, half the children will be normal but capable of transmitting the neuropathic constitution to their progeny, and half will be neuropathic.
3. One parent being normal and of pure normal ancestry and the other parent being neuropathic, all the children will be normal but capable of transmitting the neuropathic constitution to their progeny.
4. Both parents being normal, but each with the neuropathic taint from one grandparent, one-fourth of the children will be normal and not capable of transmitting the neuropathic constitution to their progeny, one-half will be normal but capable of transmitting the neuropathic constitution, and the remaining one-fourth will be neuropathic.

TABLE I.

TYPES OF MATING.	NEUROPATHIC OFFSPRING		NORMAL OFFSPRING	
	Actual Findings	Theoretical Expectation	Actual Findings	Theoretical Expectation
1. $RR \times RR \infty RR$	54	64	10	0
2. $DR \times RR \infty DR + DR$	190	$214\frac{1}{2}$	239	$214\frac{1}{2}$
3. $DD \times RR \infty RR$	0	0	45	45
4. $DR \times DR \infty DD + 2 DR + RR$	107	$80\frac{1}{2}$	215	$241\frac{1}{2}$
5. $DD \times DR \infty DD + DR$	0	0	77	77
6. $DD \times DD \infty DD$	0	0	0	0
TOTALS	351	359	586	578

5. Both parents being normal, one of pure normal ancestry and the other with the neuropathic taint from one grandparent, all the children will be normal, half of them will not be capable and half will be capable of transmitting the neuropathic constitution to their progeny.

6. Both parents being normal and of pure normal ancestry, all the children will be normal and not capable of transmitting the neuropathic constitution to their progeny.

Let us now turn to observed facts. The accompanying table, which has been copied from a recently published study of heredity in insanity,* shows the closeness of correspondence between actual findings and theoretical expectation according to the Mendelian theory.

The question might arise, what degree of correspondence may be properly assumed to be requisite. Here it should be borne in mind that the proportions of theoretical expectation are but an expression of probability of chance analogous to the expectation that in flipping a penny the head and tail will be turned up, respectively, half the number of times. In other words, according to the theory of probability, actual findings will approach theoretical expectation only as infinity is approached.

As far as our data are concerned, other points must further be considered; some subjects who are theoretically expected to be *neuropathic* figure in the statistics as normal owing to their not having reached the age of incidence of the psychosis; in other subjects *neuropathic traits* may have been overlooked by the untrained informants; and it is also possible, on the other hand, that temperamental traits which are not related to the neuropathic constitution have been erroneously interpreted and counted as neuropathic.

On the whole, taking into consideration the limited amount of material as well as the various sources of possible error, the correspondence between actual findings and theoretical expectation, as shown in the table, must be regarded as strikingly close.

II.

The expression *neuropathic constitution* is used in this paper to designate a vast class of nervous and mental conditions; in this class we are able to distinguish more or less clearly a number of groups which we have been accustomed to look upon as representing independent clinical entities; family histories show, however, that these various clinical entities are often found in members of the same family and that they are therefore not wholly independent but somehow related to one another; the question thus arises, What is the nature of this relationship? We shall have much to learn before we shall be able to answer fully this question, but the data which we

* A. J. Rosanoff and F. I. Orr. *Loc. cit.*

now possess seem to indicate two types of relationship—that of conditions of different degrees of recessiveness and that of neuropathic equivalents.

As to the first type of relationship, some of the facts which are before us make it necessary for us to assume that the hypothetical germ-plasmic determiner for complete mental development is not a unit but a group of units out of which one or more may be lacking and that the amount of this germ-plasmic defect determines in a large measure the type of clinical disorder. It appears in particular that manic-depressive insanity, while recessive to the normal condition, is dominant over epilepsy. This relationship is illustrated in charts VII and VIII which have been constructed from the pedigrees of some cases at Kings Park.

As to the second type of relationship, that of neuropathic equivalents, the principle, as all know, is by no means a new one. It has long been the practice of clinicians to count as epileptic equivalents such manifestations as delirious attacks, brief absences, spells of automatism, periodic dipsomania, and the like; and in more recent years progress in psychiatry has been marked, under Kræpelin's leadership, by a far reaching extension of the conception of clinical equivalents which resulted in bringing together many apparently dissimilar conditions into the two large groups of dementia præcox and manic-depressive insanity. The only new point, in this connection, that has been derived from heredity studies is the indication that many conditions which have hitherto hardly been suspected of being related to one another are really neuropathic equivalents: as the most striking instance of such a relationship may be mentioned that of fainting spells or convulsions in childhood as an equivalent of dementia præcox.

Before leaving this topic it might, perhaps, be well to point out that it is not assumed that members of the same family or even the children of the same parents, if neuropathic, will necessarily present clinical equivalents. On the contrary, there is very strong reason to believe that in most cases they are likely to have neuropathic conditions representing not equivalent defects but defects of different degrees of recessiveness. Theoretically it is easy to demonstrate that neuropathic offspring from matings of the fourth type only ($DR \times DR$) will necessarily have equivalent defects.*

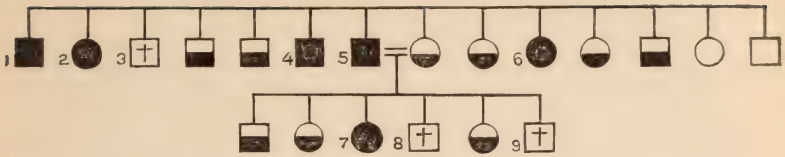
III.

Let us now consider the influence that these new facts may have upon the science of psychiatry.

In the first place it seems obvious that our conception of the nature of neuropathic conditions must eventually undergo considerable mod-

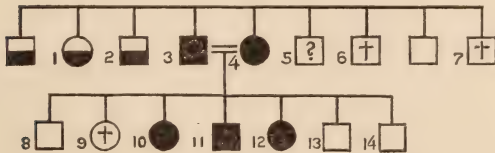
*For this demonstration I must refer you to another publication (Rosanoff and Orr, *Loc. cit.*), as it would take me too far out of my main line of argument if I were to enter upon it here.

CHART VII. CASE NO. 4215.



1. Nervous prostration, in sanitarium four weeks, recovered.
2. Manic-depressive insanity.
3. Died in childhood.
4. Manic-depressive insanity.
5. Manic-depressive insanity.
6. Epilepsy.
7. Manic-depressive insanity.
8. } Died in hospital.
9. }

CHART VIII. CASE NO. 6432.



1. Daughter has fainting spells.
2. Son queer and feeble-minded.
3. Fainting spells.
4. Recurrent attacks of depression.
5. Data unascertained.
6. } Died in childhood.
7. }
8. 22 years old.
9. Died in childhood.
10. Recurrent attacks of depression, several suicidal attempts.
11. Manic-depressive insanity.
12. Attack of depression, with suicidal tendency, recovered.
13. }
- and } 20 and 15 years old respectively.
14. }

ification. The conception of these conditions as disease processes, though it has proved to be of immense benefit in the past and has contributed perhaps more than any other factor to the progress of psychiatry, appears no longer tenable except in relation to organic affections. From the new point of view we are led to look upon neuropathic conditions as a group of features characterizing special biological varieties of our species, analogous in their mode of origin and in their mode of transmission by heredity to such features as blue eyes, fair skin, light hair, and the like: if they happen to possess greater sociological importance, their biological relationships are thereby in no way altered.

In the classification of neuropathic conditions we may gain new criteria for our guidance. Clinical facts such as symptomatology, course, outcome, etc., or purely practical considerations, such as legal responsibility or need of enforced custody, will still be utilized, but it may be anticipated that the natural basis of classification in the future shall be a better knowledge of the biological position of each distinguishable variety and of the conditions under which such varieties are produced; and upon such a basis, as already indicated, we may be able to bring together widely differing manifestations as being merely neuropathic equivalents.

From the new viewpoint diagnosis shall mean the identification not merely of special types of reaction, such as necessitate commitment to custody, but of inborn, basic traits characteristic of the several neuropathic varieties. As is well known, attempts have been made to describe the various types of abnormal makeup which constitute the characteristic soil upon which dementia præcox, manic-depressive insanity, and other psychoses develop; but a need now arises for more than that, the need is for exact measurements and the definition of the neuropathic constitution in terms which would enable the physician to diagnose it with sufficient certainty for practical guidance even in the absence of strikingly antisocial manifestations. In other words we shall introduce biological methods in the study of the neuropathic varieties; we shall make in a large number of cases every possible physical and mental measurement directly or indirectly pertaining to neuropathic characteristics and compare them with standards established by similar measurements made upon normal subjects.

Such, we may expect, shall be the influence of the light shed by the Mendelian theory upon scientific problems in psychiatry. But still greater may be the influence upon our practice as regards prevention and treatment: for prevention becomes largely a matter of eugenics and treatment a matter of palliative measures to combat antisocial manifestations.

I would venture, before closing, to consider the relation of studies in heredity to practical eugenics.

IV.

One hears a great deal from all sides about the rapid increase of insanity. The alarm is caused mainly by the fact that in the past seventy or eighty years there has been a progressive though somewhat irregular increase in the annual number of admissions to institutions for the insane and that this increase has been proportionately greater than that of the general population. The real significance of this fact is, however, not fully understood. Let us consider some of the available data which have a bearing on this question.

It has been demonstrated over and over again that migration of population from rural into urban districts results invariably in an increase of the alcoholic and syphilitic insanities and to that extent the apparent increase of insanity must be regarded as real. There are, however, other factors which operate to cause not a real increase in the incidents of insanity, but merely an increase in the number of hospital admissions. One of these factors was demonstrated by Dr. Edward Jarvis in an admirable study published nearly fifty years ago.* He observed that the number of patients that are committed from any locality to a hospital for the insane depends in a large measure upon the distance and upon the means of transportation between that locality and the hospital. This principle was very convincingly demonstrated between the years 1843 and 1865 by the admission rates to the Utica State Hospital from all the counties of the State excepting New York and Kings, which had hospitals of their own. Dr. Jarvis divided all the counties into four districts: the first district was Oneida County in which the hospital was situated; the second district consisted of eleven counties, namely, the first tier surrounding Oneida County, which were mostly within sixty miles of Utica; the third district included seventeen counties which were from sixty to one hundred and twenty miles distant; and the fourth district included the most distant counties, being between one hundred and twenty and three hundred and fifty miles from Utica. From these four districts the average annual admission rates during the years mentioned were as follows: from the first district 1 to 2,772 in the general population, from the second district 1 to 5,820, from the third district 1 to 7,351; and from the fourth district 1 to 11,535. A thorough study of this question as it presented itself in a number of other States and in some parts of Canada furnished similar results in all cases without a single exception. Dr. Jarvis then studied the effect of multiplying hospitals in States: "This principle has been remarkably manifested whenever and wherever a second hospital has been opened in any State and placed in a district remote from the one previously in operation. The people who sent a few patients to the distant institution, now sent many to the hospital which was brought

**Influence of Distance from and Nearness to an Insane Hospital on its Use by the People.* Amer. Jour. of Ins., Vol. XXII, 1865-'68.

to their neighborhood. The number of lunatics that found a place of healing was suddenly and permanently increased."

It is easy to deduce from this one great cause of the apparent increase of insanity, namely, the increase in the number of institutions and the improvement in facilities for transportation.

It is not the object of this paper to treat exhaustively the question of the increase of insanity, but another distinctly appearing factor may be pointed out which may produce an illusion of such an increase, namely, fluctuations in the economical conditions of the country. Following the financial crises of 1903 and 1907 the number of admissions to the New York State hospitals in proportion to the general population increased by 8.4 per cent and 7.4 per cent over the admission rates of the respective preceding years. Patients were admitted, who had been for years cared for at home or who had been themselves employed when the demand for labor was high, simply owing to the sudden change in the financial affairs of their relatives or to the falling off in the demand for labor, and not by reason of any real increase in the incidence of insanity.

Aside from the alcoholic and syphilitic psychoses, we do not really know to what extent, if any, the apparent increase of insanity indicates a real increase. Hospital statistics alone are hardly sufficient to give us an indication of the total prevalence of the neuropathic constitution in the general population. Times change, conditions change, and with them change the relations between the hospitals and the communities in which they are.

In a recent study of heredity* an attempt was made to estimate roughly by an indirect method the prevalence of the neuropathic constitution in the population of the Kings Park State Hospital district. That district is fairly representative, being partly urban and partly rural and showing on comparison with other State hospital districts an incidence of insanity not far from the general average. It was found that about 2 per cent of the population were actually neuropathic, 30 per cent were normal but carried the neuropathic taint in their blood, and the remaining 68 per cent were normal and without the neuropathic taint. Assuming for the moment that these various elements in the population will intermarry freely without the interference of selective influences or of any other disturbing factor; then it may be found by calculation that in the next generation the percentage of neuropathic subjects would rise to 2.89, that of those who are normal but carry the taint would fall to 28.2, and that of those who are normal and without the taint would rise to 68.89. In other words insanity would increase, but at the same time a process of purification would take place through the segregation of normal traits and of neuropathic traits in separate elements of the population.

The influence of selective forces is difficult to determine; on the one hand, the higher death rate among neuropathic subjects and some

* Rosanoff and Orr. *Loc. cit.*

amount of elimination through sexual selection must tend to reduce chances of propagation; on the other hand the lack of moral inhibition among them not infrequently leads to early marriages, rearing of large families, or illegitimate propagation. One thing would seem certain, namely, that those modern conditions which have the effect of increasing the admission rates and the permanent populations of hospitals for the insane must be regarded as forces which aid in the elimination of defective germ plasm and which are, therefore, salutary.

Without doubt this process of elimination could be hastened by a well organized eugenics movement, but it would seem that matters have come to such a pass that we may have the burden not of spreading a propaganda but of holding back enthusiasts from premature and ill-considered action. Laws providing for the sterilization of degenerates, defectives, lunatics, etc., have already been passed in Indiana, California, Washington, Connecticut, New Jersey, Iowa, and Nevada; they have everywhere remained practically a dead letter and we are already having to deal with the reaction of alarmed conservatism. In other words the net result of such legislation has been so far no good and much harm.

Even if it were possible not only to enact laws for the sterilization of neuropathic subjects but also to enforce them, nobody to-day would be in a position to tell whether or not it would be desirable or, on the whole, profitable, for the human race to do so.

It is now many years since Lombroso with his far-seeing vision has been led to observe the kinship between the neuropathic constitution and genius. Whether we agree with him fully or not, the fact is that in dozens of cases the very highest types of human activity have been associated with neuropathic traits, and in many more they have been the products of subjects of neuropathic descent. Among those who have been frankly insane may be mentioned, in the sphere of literature, Swift, Cowper, Shelley, Lamb, Burns, Keats, Byron; in the sphere of musical composition, Schumann, Wagner, Glinka; and in the sphere of science and natural philosophy, Sir Isaac Newton and Auguste Comte. If it is true that genius, which, as Lombroso says, is "the one human power before which we may bend our knee without shame," is a neuropathic manifestation, then it must be obvious to every right thinking person that wholesale sterilization would be hardly a measure of wisdom; on the contrary, genius must, at any cost, be allowed to thrive and is no matter for mediocrity to meddle with. But it may be that only certain types of the neuropathic constitution are related to genius; or that any existing relationship is not essential but incidental. Who knows? The point is merely made that the time has not yet come for radical action. The immediate need is for further investigation.

Mainly through the efforts of Dr. C. B. Davenport the State Board of Charities has created a bureau for the investigation of pauperism,

feeble-mindedness, and epilepsy. At the present time Dr. Gertrude Hall is at the head of the bureau. But steps have been taken to seek a legislative appropriation to provide for ten field workers to be employed in the work of tracing all pauperism, feeble-mindedness, and epilepsy to their sources throughout the State, county by county. The State Board of Charities has nothing to do with insanity, yet it would add but comparatively little labor, in going over the field, to record the equally necessary data concerning insanity, while at the same time the project would gain energy from a union of the interests of the State Commission in Lunacy with those of the State Board of Charities.

Dr. MAY: I would like to ask for a full discussion of the paper of Dr. Rosanoff on this most interesting subject, and I will ask Dr. Hoch to open the discussion.

Dr. HOCH: I have been much interested in the work on heredity in mental diseases, and in the studies of Dr. Rosanoff, but I feel that it is exceedingly difficult to discuss the results unless one has been actively engaged in the same kind of research. There is so much that is difficult to get from reading, and that can be acquired only by actual work on the same problems, that I think it is hardly fair for any one who has not himself dealt very directly with the problems, to discuss such studies. Therefore the claims of Dr. Rosanoff of the ready applicability of Mendel's law of heredity of mental diseases, of the recessivity of psychopathic traits, of the different degrees of recessivity, and finally his claim of equivalents, while they are very interesting, I am unable to give an opinion regarding them because so much depends upon the interpretation of the facts collected. I should like to say, however, that it is very important to have such studies made and that we all should feel grateful to Dr. Rosanoff for the energy with which he has pursued them.

Dr. MAY: There has been, I think, some work done in some of the other institutions, and I would be glad to hear what has been accomplished by others along this same line. Is there any one here who can add anything to the subject?

Dr. POTTER: Dr. Schneider, as you recall, did some work on a class of people called "claw-fingered", but he has not followed it up very carefully since that time, and there is nothing that I can add to what he published at that time.

Dr. GRANGER: The writer is to be congratulated upon his paper, and upon his thoroughness here and elsewhere, in this, a pioneer work. Also upon his conservative conclusions. One is apt to be lead away, and while early investigations are being made put forth claims and advance opinions too freely.

It would seem as though heredity of insanity is to be no longer made up of vague statements and ill assorted collections of statistics, but is to be brought within scientific investigation and logical conclusions.

A few years ago I was speculating if Mendel's principles could be applied to insanity. It seemed to me almost hopeless.* It was working backwards because it is difficult—almost impossible—in the human race to follow family history forward generation after generation. At that time we were getting some facts of a Mendelian character of certain physical conditions, but references in regard to mental diseases were too vague and uncertain to be of value. But Dr. Rosanoff and others seem to have the key and are unlocking the door.

While the principles of Mendelism are on a firm foundation, and while facts explained by Mendelism are innumerable, there is still enough left to theory to cause us to be cautious even if such theories are most reasonable and fit most closely and logically to foundation and facts. It is therefore all the more important we should be most careful in claims and conclusions. And it seems that in matters of heredity in insanity and kindred mental conditions too great an assurance of conclusion has been put forth and, unfortunately, of a too fatalistic character. No hope seems to be left. Is it fair to ask if Dr. Rosanoff's records tell the whole story. We know what has appeared in the cases reported, but we do not know how much has been missed and corrected in heredity.

Too many exhibits are of a restricted people living generation after generation together like the Jukes family and the Valley Tribe and others. Galton's Laws of Filial Regression are still true. Our people, with exception, are constantly mixing in marriage. Years ago we used to call it the law of compensation. This law that the tendency is always back to the mean; on the one hand when the mean is passed or when it falls below, is in a measure the salvation of the human race.

If I illustrate by my own family it is because I know it. But is true of all this audience. This family started about 1650, from near Boston and "went out." Ever since it has been going on and on until members of it are found the country over. Is it not fair to say that its members if fairly representing the mean have done so because it has mixed its blood with other good families; that the ones that draw it back and down are left behind. On the other hand, what would be the result if the family had remained and preserved by isolation its weaker members. It is, therefore, a fair question if we can yet draw too decided conclusions from the facts of Mendelian heredity as we now know them, when applied to man and insanity. Is there not more hope than some writers and investigators have pronounced?

Dr. RUSSELL: I am afraid I am not in position to say much on this subject. As Dr. Hoch has said, there is a technical part that one can not grasp very well just from reading or hearing, and much as I ap-

* NOTE. In 1907, Professor Thomson in *Heredity*, wrote—"Although we do not yet know of any reliable illustration of Mendelism in reference to man * * it would be rash to conclude that there is no application."

preciate the importance of it, I do not feel as if I could add anything to that part of it. I think it is very important that the work of investigating heredity should be done from a practical standpoint, and I would like to voice my own feeling that the State should support it. I hope that this will be brought about.

I think Dr. Rosanoff has expressed the situation in a very conservative way, and has left us with the feeling that it is not altogether a question of eugenics; that there are certain other things that have to be considered in bringing about the prevention of insanity. As he has mentioned, the inflow of people to the cities has resulted in an increase in syphilitic and alcoholic conditions and their results. There, of course, is a field of work that any one can enter.

Dr. ROSANOFF: Dr. Hoch has referred to the technical aspects of the paper which render discussion difficult. The whole problem, however, divides itself into two distinct questions: 1. Is insanity transmitted by heredity? 2. If so, in what manner is it transmitted: The first question is practically of greater moment and the data which furnish an answer to it are known to all. Only the second question in its treatment involves technicalities.

Dr. Granger has touched upon a number of interesting points. He emphasizes the importance of environment, and, in my opinion, justly so. I trust I have not given an impression of being in the least inclined to underestimate it. It is freely conceded that in a great many cases in spite of direct convergent neuropathic heredity indications for commitment do not arise, the subjects escaping the influence of exciting causes.

The doctrine of heredity is often objected to on the ground of being fatalistic. In the first place it must be said that if the doctrine is true we must accept it even if for any reason it should not appeal to us. In the second place discovery of the laws of heredity would rather add a new hope of human progress for it would place in our hands a new and most powerful means of improving the very instrument of such progress. Only while we do not know the law must we submit to the fatalism of its operation for better or for worse.

Another point has been raised, whether we shall ever be able to alter the germ plasm itself either by adding desirable determiners or by removing undesirable ones. No one could predict what the future shall accomplish, though the hope, like that of spontaneous generation, would seem a chimerical one.

I wish to thank your Commission for the invitation which gave me the opportunity of presenting before you the important subject in which I have been so deeply interested, and I wish to thank you all for listening so patiently to my paper which, in spite of my efforts to reduce it, has remained, I fear, unduly long.

Dr. MAY: The study of heredity is of great importance in connection with the problem of eugenics. It seems to me that it is a matter that is worthy of thorough investigation. I hope that the pre-

resentation of the work of Dr. Rosanoff will interest some of the representatives of the other institutions, and will result in an investigation being made along the same lines in the various hospitals. The only way we can throw any light on this subject is to go into it very carefully, and find out how these things stand the test of direct investigation. This is a subject that should be taken up in the various institutions as far as possible.

I see that we have with us one of the representatives of the State Charities' Aid Association, Mr. Elwood, and I would like to ask him at this time if he can say anything of the work which the Association is engaged in at present which will be of interest to the various hospitals.

MR. ELWOOD: This comes upon me rather suddenly. First, I should like to express my appreciation of the opportunity of being here and meeting the various hospital superintendents and members of staffs and getting their opinions and advice as to how to go forward in this big project—a complicated project—mental hygiene and the prevention of insanity in New York State. We find, as we proceed, that we must not expect too great things in too short a time. We find that the problem is a very complicated one, one requiring patience and one requiring tact and energy in pushing it forward. We endeavor at all times to act in accordance with the advice of the physicians who are studying these problems, studying the causes of insanity, studying the treatment of insanity, and who are right in the active field. Our committee is composed of representatives of the State hospitals as well as other physicians who are dealing with insanity and its causes. I feel, as a layman, that our greatest work is to present to the public the findings of the medical profession, and the more I proceed in this work the more I feel that the public is very ignorant, not only of the causes of insanity, but also of insanity itself. It is also more ignorant that it should be of the great work which is being done in the State hospitals. In our work for the prevention of insanity we feel that extending the popular knowledge of our State hospitals would result in earlier commitments, and in overcoming much of the aversion to hospital treatment which has been prevalent for a long time. To further this, we are promoting the establishment of psychopathic wards in our general hospitals, observation wards, and mental clinics, so that the public may have access to good medical treatment, to proper mental examination, and be induced thereby to secure treatment early in their psychoses. The promotion of these measures is, I believe, worthy our time and consideration. The matter which is of special interest to us now is the pending legislation relative to immigration in Washington, and if there is any support that the hospital superintendents can render the State Commission in Lunacy I am certain we would appreciate it from our standpoint of prevention. The increase of insanity in New York State may be partly due to the fact that the examination of immigrants

at Ellis Island has not been what it should have been. Consequently, many immigrants have been coming in who possess an unstable mentality, and who develop insanity in a few years after landing. Legislation which provides for better examination and for more extensive deportation, will aid in our work for prevention of insanity in New York State.

I happen to have with me a very brief report of our work of this year which is to be read to-morrow at the annual meeting, and I may be permitted to read this, although it was not prepared for this occasion.

THE REPORT OF THE COMMITTEE ON MENTAL HYGIENE TO
THE ANNUAL MEETING OF THE STATE CHARITIES' AID
ASSOCIATION, FEBRUARY 16, 1912.

The year 1911 has witnessed the steady progress and development of the work of the Committee on Mental Hygiene for the prevention of insanity in New York State. The work naturally divides itself into the four following lines:

1. "General education of the public as to the causes of insanity."
2. "Promoting the establishment of clinics for nervous and mental diseases."
3. "Assisting individuals needing medical treatment."
4. "Promoting desirable legislation."

GENERAL EDUCATION OF THE PUBLIC.

The causes of insanity and means for its prevention have been brought to the attention of the public by means of circular letters, popular pamphlets, public meetings and lectures, press bulletins and magazine articles.

Circular Letters. Circular letters have been issued to the number of 24,845 to professional men, clergymen, teachers, social workers, heads of organizations and to the 13,474 physicians in the State, asking their co-operation in the distribution of popular literature, and in spreading information as to the causes of insanity.

Popular Pamphlets. Two pamphlets have been issued, stating in popular language the causes and means for the prevention of insanity. One outlining the plan of work has been issued to the number of 12,000; the other giving some facts as to the extent, causes and prevention of insanity has been issued to the number of 485,000, of which 404,000 have been distributed.

Public Meetings and Lectures. Public meetings have been held during the year in New York City and Syracuse. Similar meetings are already scheduled for Rochester and Hudson, and plans are being made for meetings in other cities of the State. Numerous smaller meetings before clubs, churches and organizations have been addressed by the Assistant Secretary of the Committee, and by various phy-

sicians familiar with the work. Dr. Albert Warren Ferris, President of the State Commission in Lunacy, has delivered five lectures during the year, and the Assistant Secretary has addressed thirteen meetings and conventions.

Press Bulletins and Magazine Articles. Numerous press bulletins and magazine articles have promoted further education of the public. One press bulletin, which gave a summary of the causes of insanity and the present plans for its prevention, was used in 135 country newspapers throughout the State of New York, representing a total stated circulation of 215,000. The *Review of Reviews* for May, 1911, printed an article by Mr. Folks, giving, in a very complete manner, the causes of insanity and the plans for its prevention by the Committee on Mental Hygiene in New York State.

PROMOTING THE ESTABLISHMENT OF CLINICS.

Present clinics are being examined for the purpose of emphasizing good features and calling the attention of the public to their existence. It is planned to issue a pamphlet on clinics for mental and nervous diseases. During the year the Long Island State Hospital has established an out-patient department; Syracuse has established a psychopathic hospital; Rochester is contemplating the construction of a psychopathic ward; Kings County is planning to add a mental clinic, and the new Gouverneur Dispensary will have such a clinic.

ASSISTING INDIVIDUALS NEEDING MEDICAL TREATMENT.

During the year 78 people have been advised as to where they might obtain proper medical treatment and advice. In some cases the individuals have been committed to State hospitals. In other cases treatment at the mental clinics resulted in complete recovery. Some of these cases have been furnished social service which they needed as much as medical treatment.

PROMOTING DESIRABLE LEGISLATION.

A bill simplifying commitment to the State hospitals from New York City has been very carefully prepared by the Hospital Committee and the Mental Hygiene Committee and will, undoubtedly, be introduced in the State Legislature on the recommendation of the Legislative Committee of the State Hospitals Superintendents. A federal bill on immigration which requires mental examination of every immigrant, and which makes possible a larger number of deportations, is being actively supported by this Committee.

Dr. MAY: It is very interesting to know of the work that has been done by the State Charities' Aid Association and its committees, and to know what has been accomplished in the past year, and what they hope to do in the future. The legislation referred to by Mr. Elwood is of course of great importance. The Board of Alienists has inter-

ested itself very actively in this matter, and the Commission in Lunacy has taken steps toward furthering the interest of this legislation in Washington. Senator Dillingham has already introduced a bill which will remedy many of the existing defects in our immigration laws and which will unquestionably result in the deportation of a great many more of our aliens. The representatives of the Commission have taken up this matter with the committee to which the bill has been referred. The committee has agreed to adopt practically all of the amendments which were not embodied in the original bill, and the chairman has expressed his willingness to add other amendments on the floor of the senate when the bill is finally passed upon. One of the principal and most important changes in legislation which is accomplished by this bill is the removal of all time limits so that aliens can be deported at any time owing to insanity resulting from causes existing prior to landing, instead of within three years as is now the case. The intention of the Commission was to endeavor to have this time extended from three years to five years, but the bill as introduced has removed the time limitations entirely, which was far beyond the expectations of the Commission or of the Board of Alienists, or any one else interested. This provision, I am inclined to suspect, will arouse the antagonism of the steamship companies and some other persons who are intimately affected by the results of this legislation, and it is possible that the fact that all time limits have been removed will operate against the bill. For this reason perhaps the retention of the five year clause might have been better.

I would like to hear any discussion of Mr. Elwood's very interesting report and any views which may be expressed as to the co-operation of the various institutions with the efforts which are being made by the State Charities' Aid Association.

DR. MABON: As far as the Manhattan State Hospital is concerned, we are familiar with the work that is being done by the Committee on Mental Hygiene, and we heartily endorse the work, and are willing to co-operate in every way.

DR. RUSSELL: I would like to state in behalf of the Committee on Mental Hygiene, of which I am vice-chairman, that we would like very much to have any suggestions from the superintendents in regard to the methods and possible ways in which the work may be carried on successfully. There is one thing I would like to see brought about, and that is to have the assistant physicians interested so that they could be called upon occasionally to take part in the meetings. Sometimes the meetings are before small audiences because efforts are being made to address bodies that are gathered together for other purposes than to listen to a lecture on mental hygiene. There will be occasion to use a considerable number of persons, and we would like very much to have the assistant physicians take this up. It would be a useful experience for them and they could do much good.

Dr. MAY: There is a very good opportunity for the superintendents and their assistants to co-operate with the Committee on Mental Hygiene, and I would like to hear any remarks that any one would like to make in regard to the subject. One of the most important results that the committee can accomplish is in the encouragement of the establishment of psychopathic hospitals in various cities.

Dr. MAY: There is yet a report to be made by Dr. Mabon as Chairman of the Committee on Amendments to the Insanity Law which should be heard at this time.

Dr. MABON: The Committee on Legislation begs to report that since the last conference the committee has had two meetings with the State Commission in Lunacy, and most of the recommendations made by the committee were approved by the Commission. In conference they also took up the question of the wage bill and the question of the pension bill was referred by the Commission to this committee.

The new matter referring to legislation applies especially to private institutions, and to the commitment of the insane in New York City. About the latter it may be said that it is very difficult to get patients to the psychopathic ward at Bellevue Hospital except through a Magistrate's Court, and hence it is a daily occurrence to have patients apprehended by a peace officer and taken before the magistrate. The provision recommended by the State Charities' Aid Association and approved by the resident alienists at Bellevue and the Kings County Hospital was carefully considered by the committee, who recommended that the amendment as submitted by the State Charities' Aid Association, and as modified in conference with the committee, be approved.

An additional amendment is suggested in regard to the maintenance of the Psychiatric Institute. The principal features being the elimination of the words "Manhattan State Hospital" and the substitution of the words "State Hospitals," also that the funds for maintenance of this institution be provided for by legislation upon recommendation of the Commission.

MARCH 22, 1912.

REPORT OF THE COMMITTEE ON LEGISLATION TO THE CONFERENCE.

The Committee on Legislation would respectfully report that since its last statement it has had several meetings as well as conferences with the State Commission in Lunacy. As a result the following changes are to be incorporated in the general amendment to the Insanity Law.

1. At the suggestion of the State Commission in Lunacy, it shall be designated "The State Hospital Commission," and the members of same to be called "The State Hospital Commissioners." The Presi-

dent of the same to be selected by the Commissioners. The qualifications of the medical member of the Commission provide that he shall be a reputable physician, a graduate of an incorporated medical college, of at least ten years' experience in the actual practice of his profession, and must have had five years actual experience in the care and treatment of the insane in an institution for the insane, doing away with the former phraseology "who has had experience in the management of institutions for the insane." There was no change suggested in the term of office of any of the Commissioners.

2. Provision is made that the Medical Inspector shall have at least five years' actual experience in an institution for the care and treatment of the insane.

3. The words "for compensation or hire" are stricken out of Section 9 in reference to institutions and inspection of sanitariums and other institutions where sick or infirm patients are received, cared for and treated.

3. The per capita cost of buildings is eliminated.

5. A Bureau of Deportation is provided for instead of a State Board of Alienists, and a further provision is made that this shall consist of a medical examiner and such number of deputies as may be necessary. The provision for inspecting and examining immigrants coming into the country is changed so as to read: "Such bureau shall maintain a careful inspection and observation of the methods and facilities for examining immigrants for mental disease and defect at the port of New York, and shall report to the Commission upon the methods employed and their efficiency, and shall render reports regarding the prevalence of insanity among aliens and the foreign born population of the State and shall make suitable recommendations for the return or deportation of insane, idiotic, imbecilic and epileptic aliens. Such Bureau shall also examine and inspect aliens and non-resident insane in the State hospitals and other public institutions or elsewhere wherever they may be for the purpose of determining whether they are suitable either for deportation under the immigration law or removable under the provisions of this act to other countries or States. The Bureau shall notify the proper authorities at the ports of entry and shall arrange for deportation in accordance with the provision of the law. The amendment further provides that in making such transfers or removals, either upon the request of the indigent insane persons, or the written consent of their relatives, legal representatives or qualified friends, nurses and attendants shall be employed to accompany them unless the medical superintendent shall certify that such patients are in condition to travel alone with safety.

6. The provision of the present law providing that a committee consisting of one member of each board of managers or other representatives designated by such board, shall establish by-laws, rules

and regulations, is transferred to a committee of three superintendents to be appointed by the State Commission in Lunacy.

7. The present provision, that the superintendent shall personally examine the condition of each patient within five days after his admission, is changed so as to read: "The superintendent shall make or cause to be made an examination of the condition of each patient within five days after his admission to the hospital."

8. The appointment of a steward is placed in the hands of the superintendent without the approval of the Commission.

9. The provision for staff meetings is changed so that the superintendent shall cause to be held at least two meetings of the medical staff each week.

10. The amendment provides that food supplies shall be allowed the officers and employees and the families of the superintendents, first assistant physicians, directors of clinical psychiatry and stewards and where quarters are available in the judgment of the superintendent such maintenance may also be allowed senior assistant physicians and assistant physicians subject to the approval of the Commission.

11. In proceedings to determine the question of insanity, provision is made that in addition to the father or mother, husband or wife, brother or sister, or the child of any such person, or superintendent of the poor of the county, the application may be made by the next of kin available, the committee of such person, or an officer of any well-recognized charitable organization or home.

12. The time is extended from five to ten days in which a person shall be committed to an institution upon the order of a judge of a court of record.

13. The time of emergency commitments is extended from five to ten days.

14. Special provision is made for the commitment of patients in the City of New York to the effect that when the trustees of Bellevue and Allied Hospitals, who have charge of the commitment of the insane in the Boroughs of Manhattan and the Bronx, and the Commissioner of Public Charities, who has charge of the commitment of the insane in the Boroughs of Brooklyn, Queens and Richmond, it shall be the duty of the officers of these institutions to send a nurse or medical examiner in lunacy attached to the psychopathic wards of their respective institutions, or both, to the place where the alleged insane person resides or is found, and if the person is in immediate need of care and treatment he shall be removed to the psychopathic ward for a period not to exceed ten days. The person or persons most nearly related to him shall be notified of such removal.

15. Provision is made that in no case shall any insane person be confined in any other place than a State hospital or duly licensed institution for the insane for a period longer than ten days, nor shall such person be committed as a disorderly person to any prison, jail or

lock-up Authority is given to the health officers in counties outside the City of New York and the County of Albany, to see that whenever such a person is confined in such a place it must be in charge of an attendant, and the health officer shall select some suitable person to act in this capacity. Whenever a person is arrested as disorderly, and it is found that the person is insane, the officer making such arrest, shall notify the health officer of the town, village or city, except in the City of New York and the County of Albany, and the health officer shall forthwith take proper measures for determining the question of the insanity of such person, and provide for his proper care and treatment pending his transfer to an institution for the insane. Whenever in the City of New York an information is laid before a magistrate that a person is apparently insane the magistrate must issue a warrant directed to the sheriff of the county in which the information is made, or any marshal or policeman of the City of New York, reciting the substance of the information, and commanding the officer forthwith to bring the individual before the magistrate issuing the warrant. If it appears upon arraignment that the person is apparently insane, it shall be the duty of the magistrate to commit such insane person to the care and custody of the Board of Trustees of Bellevue and Allied Hospitals, or to the Commissioner of Public Charities until the question of his insanity may be determined.

16. The Commission shall fix the rate to be charged for the maintenance of patients in a State hospital and the payment of which shall be secured by a surety company bond approved by the Commission, and the superintendent may recommend to the Commission the removal of the insane, other than poor and indigent, to duly licensed private institutions, and the Commission shall have the power in its discretion to compel such removal.

17. A hospital paroling a patient shall not be liable for his expenses while on parole. Such liability shall devolve upon the relative, committee or person to whose care the patient is paroled, or the proper poor official of the town or county in which he may have found domicile.

18. Suitable provision is made for the discharge of patients from licensed institutions, and wherever the committee or relatives of a patient discharged from a private institution refuse to provide properly for his care and treatment, the superintendent or medical officer in such an institution may apply to the Commission for the transfer of the patient to a State hospital provided the patient so sought to be transferred is a legal resident of the district.

19. Formerly there was no provision for paroling a patient in a private institution except under regulation of the Commission. This is now made statutory as in the case of State hospitals.

20. The legal authority for receiving voluntary patients is extended to licensed private institutions. Formerly this was regulated by an order of the Commission. Under the proposed amendment the

superintendent or physician in charge of a licensed private institution shall furnish the medical commissioner or medical inspector a complete list of all voluntary cases received since the last visit of such commissioner or commissioners, and it is the duty of such medical commissioner or inspector to examine such cases and determine if they belong to the voluntary class. Any failure to conform to the requirements of this proposed amendment shall be deemed sufficient cause for revocation of the license.

21. When a person is committed to the Matteawan State Hospital a copy of the minutes of the proceedings instituted to determine his mental condition shall be furnished to said hospital.

22. Under the present law the Commission may by order in writing transfer to the Matteawan State Hospital any inmate of a State hospital. To this has been added "who is held under any other than civil process."

23. Certain amendments were suggested in reference to the Dannemora State Hospital.

24. An amendment is submitted to the effect that the Psychiatric Institute shall be maintained by the Commission as part of the State hospital system from appropriations obtained for such purpose. Wherever the words "Manhattan State Hospital" appear in this section the words "State hospitals" are substituted.

Your committee expresses to the State Commission in Lunacy its deep appreciation of the valuable suggestions and advice it has so unstintedly given in the discussion of the varied subjects brought before it by the committee.

Respectfully submitted,

WILLIAM MABON.

Meeting adjourned at 4 P. M., after which the wards of the institution were visited.

MINUTES OF QUARTERLY CONFERENCE.

APRIL, 1912.

Minutes of the conference of State Hospital Superintendents and representatives with the State Hospital Commission, held at the Capitol, Albany, N. Y., April 16 and 17, 1912.

Present—

Commissioners SANGER, BISSELL and MAY.

Dr. AUGUST HOCH, Director of the Psychiatric Institute.

WALTER G. RYON, M. D., Medical Inspector for the State Hospital Commission.

Utica State Hospital, HAROLD L. PALMER, M. D., Medical Superintendent.

Willard State Hospital, ROBERT M. ELLIOTT, M. D., Medical Superintendent.

Hudson River State Hospital, CHARLES W. PILGRIM, M. D., Medical Superintendent.

Middletown State Homeopathic Hospital, MAURICE C. ASHLEY, M. D., Medical Superintendent.

Buffalo State Hospital, GEORGE W. GORRILL, M. D., First Assistant Physician.

Binghamton State Hospital, CHARLES G. WAGNER, M. D., Medical Superintendent.

St. Lawrence State Hospital, PAUL G. TADDIKEN, M. D., First Assistant Physician.

Rochester State Hospital, EUGENE H. HOWARD, M. D., Medical Superintendent.

Gowanda State Homeopathic Hospital, DANIEL H. ARTHUR, M. D., Medical Superintendent.

Long Island State Hospital, ELBERT M. SOMERS, M. D., Medical Superintendent.

Kings Park State Hospital, WILLIAM A. MACY, M. D., Medical Superintendent.

Manhattan State Hospital, WILLIAM MABON, M. D., Superintendent and Medical Director.

Central Islip State Hospital, GEORGE A. SMITH, M. D., Superintendent and Medical Director; M. B. HEYMAN, M. D., First Assistant Physician.

- Mohansic State Hospital, ISHAM G. HARRIS, M. D., Medical Superintendent.
- Matteawan State Hospital, JOHN W. RUSSELL, M. D., Medical Superintendent.
- Dannemora State Hospital, CHARLES H. NORTH, M. D., Medical Superintendent.
- Bloomington Hospital, WILLIAM L. RUSSELL, M. D., Medical Superintendent.
- Marshall Sanitarium, CHRISTOPHER J. PATTERSON, M. D., Physician in Charge.
- Mr. FRED J. MANRO, Mr. JOSEPH CAMERON and Miss BERTHA PECK, Managers, Willard State Hospital.
- Mr. WILLIAM H. ROGERS, Manager, Middletown State Homeopathic Hospital.
- Mr. WILLIAM H. HECOX and Dr. LAVINIA R. DAVIS, Managers, Binghamton State Hospital.
- Dr. EDWIN H. WOLCOTT, Manager, Gowanda State Homeopathic Hospital.
- Dr. GUSTAV SCHOLER, Manager, Manhattan State Hospital.
- Rev. JOHN C. YORK, Manager, Kings Park State Hospital.
- Mr. E. S. ELWOOD, Assistant Secretary of the State Charities' Aid Association.

Commissioner SANGER in the chair.

The CHAIRMAN: By the kind and generous action of my associates on this Commission, it becomes my duty, as well as my pleasure, to preside at this conference, but I need not tell you that the Commission retains the same high opinion which it always had of the medical profession and recognizes its fitness and ability to perform any duty it may have imposed upon it.

Our work this afternoon begins with an explanation by Dr. Wagner of a method which he has found satisfactory in regard to the storage of eggs at the Binghamton State Hospital.

Dr. WAGNER: I have not much to say on this subject, and what I have to offer is neither new nor original. At the Binghamton State Hospital for several years past we have every year preserved an increasing number of eggs by what may be called the silicate of soda or water glass method. In brief, the method is this: The clean, strictly

fresh eggs are packed in stoneware containers and covered by a ten per cent by volume solution of silicate of soda. The eggs should preferably have been for a short time at room temperature, or at any rate, at a temperature slightly warmer than that of the silicate solution, so that on being immersed in the latter, there will be a slight contraction of the air and other gases within the shell, thus tending to quickly draw the silicate solution into the interstices and so quickly seal them. We used distilled water for making the solution. This method was described at length on page 34 of the *Farmer's Bulletin* issued by the Department of Agriculture in 1906.

This bulletin states that there are two methods of preserving eggs, one by cold and the other by this solution of silicate of soda, that have been found more or less satisfactory, but that the silicate of soda preparation is more satisfactory than cold for the reason that any amount of cold short of destruction of the egg does not destroy the germs or bacteria within the egg shell.

Those who desire to make use of this method can obtain this bulletin, known as "Eggs and their Uses as Food," I think, of the Department of Agriculture, Washington, D. C.

I may add that during the past winter, eggs that were stored in April and early May, last year, were used by members of the staff for family table consumption and I have been assured by all, who have so used them, that they never had had as satisfactory eggs taken from storage.

A discussion followed in which Drs. Pilgrim, Smith, Taddiken, Ashley, Mabon and Wagner and Messrs. Rogers and Manro participated.

The CHAIRMAN: If there is no further discussion, the suggestion made by Dr. Mabon will be acted upon and the matter will be taken up with the Purchasing Committee. If nothing further is to be said on the subject of eggs, we shall have the pleasure of hearing from Dr. Howard on the Sunday leaves of absence of employees.

Dr. HOWARD: (Reads letter from employees):

DR. E. H. HOWARD,
Superintendent, Rochester State Hospital.

DEAR DOCTOR:

We, the undersigned employees engaged directly in the ward service of this institution, respectfully request that the present schedule of Sunday duty be changed to every other Sunday, rather than every third Sunday.

You will agree with us that the hours of duty in our department are much longer and the work more trying than in most of the other departments in the hospital.

We sincerely hope that this will be favorably considered by our Superintendent, and can assure you of our heartiest co-operation in every way with this schedule if you will give it a trial.

Respectfully submitted,

(SIGNED BY SEVERAL EMPLOYEES.)

I would like to bring the matter to an issue and so move that it be referred to the Committee on Rules and Regulations to the end that when the schedule of wages for the first of April, 1913, is promulgated and the rules and regulations attached thereto are published, there may be found therein the voice of this conference as to this matter.

The CHAIRMAN: It is moved and seconded that this question be referred to the committee now at work on the preparation of by-laws, rules and regulations: the conference hopes to have at nine o'clock to-morrow morning, at least a preliminary report from this committee, and I have no doubt they would be very glad if the doctors and managers present would express their views upon this question that they may have the benefit of their suggestions.

After a discussion of the subject by Drs. Mabon, Howard, Wagner and Macy, a rising vote was taken.

The chairman announced that the motion of Dr. Howard had prevailed, ayes, nine; noes, seven.

The CHAIRMAN: You are aware that the question of building a new hospital, to relieve the metropolitan district, has been under very careful consideration. A site was purchased at Mohansic and it has been decided to go on with the work there. The superintendent of that hospital, Dr. Harris, has for a long time been studying the question of

what ought to be done in order to have there the best possible hospital for the care of our patients and he will tell us, this afternoon, something about the plans which he has worked out.

TALK RELATIVE TO THE DEVELOPMENT OF MOHANSIC.

Dr. HARRIS: The site for Mohansic State Hospital is situated in the northern portion of Westchester County, about 38 miles from New York City and 7 miles east of Peekskill, bounded on the north by what is known as Crom Pond Road and on the south by Lake Mohansic, which is a large body of water about a mile long and from three to six hundred feet wide. The lake is about 450 feet above sea level. Just to the east of Lake Mohansic is a smaller body of water known as Crom Pond. For the sake of description, the site is divided into two parts, the east hill and the west hill. The valley intervening between the two is the west valley, while that one bordering on the east is the east valley. The east hill is 580 feet in altitude while the highest point on the west hill is 550 feet. The site picked for the location of the hospital proper is on the west hill. The extreme western ridge of this hill has an elevation of from 520 to 550 feet, running from the north to the south. Just east of the main ridge is a large plateau extending the whole length of the site from Crom Pond Road to Lake Mohansic. It is about 3,600 feet by 800 feet and has an elevation of from 510 to 530 feet from the north to the south.

This block plan is the final development of a number of studies. I have made eight or nine such and the State Architect's office has made several. After much study and independently of each other, the State Architect and myself have come to the conclusion that this outline is the best and most workable solution. In the development of our plans, we have thought it advisable to make groups. On the plateau on the west hill, we have placed the medical group, hospital and infirmaries, psychopathic ward and tuberculosis hospital. The tuberculosis hospital is about 400 feet from the infirmary building and 600 feet from the

psychopathic hospital. It is set back to the west of these two buildings. On the lower plateau are the following: the administration building near the Crom Pond Road, and in the rear of this, will be the group of cottages for the chronic women patients; next, the amusement group center and then the group for men, and next is outlined a group for 600 patients, showing possible future extension. On a hill near the lake, between the west and east hills, is the Gross or middle hill, with a maximum elevation of 540 feet. On this hill will be placed the group for disturbed cases. On the lower end of the east hill will be placed the farm colony to accommodate at least 200 patients. As thus planned, the institution will accommodate 3,000 patients, and it was thought it was necessary by the State Architect and the State Hospital Commission, that we should show to what extent we could develop this site.

A railroad is being built on the site across the lower end of the east hill, over the west valley, and along the side of the west hill, extending to Crom Pond Road, a distance of a little over two miles. Along the line of the railroad on the west hill will be placed the service buildings, viz.: the industrial groups, power house, shops, laundry, storehouse, bakery, etc.

The group for disturbed cases is 1,800 feet from the power house. This hill rises up gently from the lake and gives a splendid view of the surrounding country. On the lower side of this hill, facing the lake, we will be able to place convalescent cottages, amusement parks, etc. On the lower side of the east hill is a large area which can be devoted entirely to location of piggeries and sewage disposal plant.

In the development of this institution, it has been thought wise to advocate the cottage plan. My own opinion in the matter is that no cottage should be built to accommodate over 50 patients. This plan calls for cottages to accommodate 100 patients, with no ward for the chronic cases to accommodate over 50 patients and small dormitories to accommodate not over 20, and no dining room for this class to accommodate more than 100. It is a question whether

or not they should be smaller, and it is a thing about which we would like to have the various members of the conference express themselves freely. The infirmaries should not have more than 50 in each ward and should have small dormitories and sitting rooms, with a central kitchen and dining room. The tuberculosis buildings should have small wards, not over ten in any one dormitory. The psychopathic hospital, which is one of the most important buildings, should have small wards to contain not over 20 persons and no dormitory to contain more than six or eight, and the dining rooms should be small. In this building there should be a number of special rooms for the following uses: electrotherapy, hydrotherapy, massage, dressing, operating, examinations, training school, nurses' office, continuous baths and all special equipment for the proper treatment for all psychoses in their various phases; and besides these special rooms, a number are necessary for the study of neuropathology, psychoanalysis, etc., and for individuality in treatment, as this method is considered far superior to the treatment *en masse*.

The main kitchens are situated in the center of each group with dining rooms extending around them. In the chronic group for women, we have on the west of the center axis the nurses' home. Directly opposite, on the east axis, we have the industrial buildings for women. In the chronic group for men there is a similar arrangement of the nurses' home and the industrial building for men. The power house is on the center axis of the whole group of buildings and on the railroad siding. The storeroom lies at point 7 on the map. The laundry is placed directly west of the power house. The bakery is just south of the storeroom. A switch from the railroad will be run to the storehouse and bakery.

The isolation pavilion is off on the southern portion of the west hill at an elevation of 540 feet. It should be built to accommodate 20 of each sex with special equipment and special baths. The tuberculosis hospital should have special equipment for the treatment of this disease and there should also be connected with it a small crematory for burn-

ing refuse, sputum, etc. We advocate the use of all modern equipment in all buildings and fireproof construction. We will not consider the details of any one of the buildings.

Water for the institution will be taken from Lake Mohansic and the filter plant should be placed near the power house. The water should then be pumped to the highest point on the east hill into a large reservoir at an elevation of 580 feet, from which water can be supplied by gravity to all the buildings. The water pressure for fire purposes should be at least 15 pounds *at the roof of each house*. Water for all culinary and drinking purposes should be filtered. The water for hydrants and irrigation and the farm, need not be filtered. The sewage disposal will be by gravity from all houses, except possibly a small portion of the power house. The sewage disposal system should be a modification of the Imhoff method. Of course all the effluents should be rendered absolutely harmless before the water is permitted to flow on the grounds so as to prevent possible contamination of any source of water supply.

We shall have a central heating plant for all of the main buildings. Also a central power plant for light. I should like to hear the expression of opinion concerning the advisability of a central power plant in heating an institution of this size which will cover a radius of 2,000 feet. The greatest distance from the power house to the farthest point to be heated from the plant, will be 2,600 feet or more. Of course, the buildings in the farm colony on the east hill will have to be heated independently as the distance from the power plant is 4,000 feet or more. I would also like an expression of opinion as to the amount of space per patient in the dormitory, the day room and the dining rooms; the size of single rooms, and also on any other feature that any one wishes to bring up. In my reprint, I advocated not under 50 square feet per person in day room or dormitory, and I think the allowance should be a little higher.

This is our general outline. I have not gone into any details as I fear to trespass farther upon the time of the conference. I thank you for your courtesy.

The CHAIRMAN: If there are any matters which it is

desired to ask Dr. Harris or Mr. Metcalfe, who is here from the State Architect's office, either gentleman will be very glad to give the information desired. As Dr. Harris has indicated, it is of very great importance that we should get the full benefit of the experience of superintendents and physicians who have served in other hospitals. Of course, it is important that this hospital should avoid every possible error which might creep in planning or methods; you do not know how strongly the Commission feels we are all one body; the medical forces of the Commission are all working for a common purpose; here is an opportunity for us to talk in the most free and informal way in regard to these plans, so that when they are finally adopted, we can all feel there is no institution in the world better than this in all its details as well as in its general plan.

Dr. PALMER: I would like to ask Dr. Harris how many dining rooms he has for the three thousand patients.

Dr. HARRIS: It is planned on a basis of one dining room for each 100 patients of the chronic class. In the tuberculosis group, there will be about 50 in a dining room. In the psychopathic hospital, it has been a mooted question, and it has not been definitely settled whether to put 25 or 50 in a dining room. For disturbed cases, the dining rooms should not seat over 25.

The CHAIRMAN: Dr. Palmer's question is not how many people you can put in each, but the number of dining rooms and kitchens.

Dr. HARRIS: There are seven dining rooms. In each of the chronic groups for men and for women, there is a central kitchen and six dining rooms to each kitchen. In the chronic disturbed group for men, there is one kitchen and there should be at least six dining rooms.

Dr. PALMER: The reason I ask the question is, we are interested at Utica in the plans for the hospital at Marcy, and the question arises as to the facility for the distribution of food supplies from the storehouse to the kitchens and from the kitchens to the dining rooms, and also, how far away from the central power plant the various wards may be for economical administration. How best, in other

words, to locate the central plant in relation to the numerous wards, to eliminate too great extensions of the steam pipe which will have to be carried from the power plant to the various wards and other buildings; also the water mains and the cables for lighting, if it is all to be taken from one plant, and I was interested to know how Dr. Harris had arranged it. Of course, the two sites are quite dissimilar, the Mohansic site being composed of two principal hills, the west and east hill, while the Marcy site is a gently sloping area all in one direction. Dr. Harris stated that there were three thousand patients provided for and only one hundred in a building, which would make thirty buildings.

Dr. MABON: I do not like to criticize, but it seems that seven kitchens for three thousand patients will be a rather expensive arrangement.

I see it is proposed to have a men's home and a women's home. It seems to me in planning a new institution, we should have a nurses' home which should be apart and distinct from the employees' home. We should separate the nurses from any other class of employees, have two homes, one for nurses and the other for employees not connected with the training school.

Dr. HOWARD: Might I ask what water pressure is at the hydrants.

Dr. SCHOLER: Did I understand Dr. Harris right by saying that he is going to filter the water from the Mohansic lake and give the institution the best of water, is that correct, and did I understand that the sewage should go into the Croton watershed and be carried to New York City.

Dr. HARRIS: No, sir; I did not say that. The overflow of this lake runs into the Croton watershed and the water from these filter beds should have to be rendered harmless and inert before it would go into any stream.

Dr. SCHOLER: What disposes of this sewage?

Dr. HARRIS: It is disposed of by the Imhoff method or its modification. The water comes out clear into a large tank, is treated chemically and is then disposed of. I am informed that this method meets with the approval of the Board of Health, in plans similar. The Health Depart-

ment has not approved of any plan for us as yet, but it has approved the plan for the Training School for Boys which lies south of us, and the method to be installed there will practically be the same sort as we are considering.

Dr. SCHOLER: I have seen several plans in Europe in institutions like this and I know that they are very particular and careful to use every bit of fertilizing matter, and that can be done in this institution.

Dr. HOWARD: I would like to raise a question as to whether fifteen pounds pressure is enough for the protection of insane people in case of fire, and to sound a warning if fifteen pounds is all there is to be, when taps are open and water drawn; fifteen pounds disappear with great rapidity, and then I want to raise seriously the question the doctor has brought up relative to the disposition of the sewage. I think I am not wrong in stating that no man or combination of men yet knows how to transform sewage into a proper kind of water to run into a stream that is to furnish water for people to drink. No scheme or modification has ever yet brought the sewage water to that perfection, and chemical treatment combined with all the different methods known, I am very sure, will not accomplish it. It ought not to be enough for the State of New York to feel that some examining board has approved of it for some institution. It ought either to be right or it ought not to be put in there at all.

Dr. ARTHUR: Is it planned to have a central power plant for the whole institution, or just the chronic buildings, and another power plant for the acute infirmary and tuberculosis building?

Dr. HARRIS: All the institution except the farm colony over here (pointing to a map).

Dr. ARTHUR: What is the distance from the tuberculosis and acute hospital down to the lower end of the chronic buildings?

Dr. HARRIS: The tuberculosis building from the power house is about two thousand feet, and from the power house to the furthest group for disturbed cases is a little over two thousand feet, between 2,000 and 2,500.

Dr. WAGNER: Dr. Harris said something about expression of opinion as to the relative merits of a central heating plant or some other method of heating. I would like to ask him if he meant a separate heating plant for each and every building, as contradistinguished from the central power plant. It seems to me there can be no question whatever as to the desirability of a central power plant for all of the buildings constituting the main group. Maybe the outlying buildings are so far away that it is undesirable to extend steam lines to them, but excepting such buildings, it seems to me there is no room for question as to the desirability of a central plant. If the idea of having two or three central plants is entertained, it seems to me that the main objection is this: that you gain nothing by that arrangement at all comparable to the advantage of a central plant. You would have to have each similar group connected by main steam lines and when you add the lines connecting them with the central power plant you are not adding very expensive equipment, and you are adding a great deal in economy of administration.

I would emphasize Dr. Howard's criticism of the water pressure. If there is only fifteen pounds water pressure, it is utterly worthless as fire protection.

Dr. HARRIS: The fifteen pounds pressure is at the roof of the house. There is one thing I have failed to state, and that is, we should have a special pump and engine to re-enforce the water pressure, in case of an outbreak of fire.

Dr. WAGNER: I thought you had stated that the hydrant pressure on the ground was fifteen pounds.

The CHAIRMAN: The conference would be glad to hear from Mr. Metcalfe, who represents the State Architect's office.

Mr. METCALFE: I am a bit at a disadvantage in discussing this particularly, as I was not present when Dr. Harris read his report. As to the point of sewage disposal, this has been looked into and we have taken as a basis the other institution which is across the lake, and we are establishing the same sort of sewage disposal plant for this institution as in the other. Of course, the matter can be

looked into more carefully, but at least this is the cheapest form of sewage disposal that it is possible to install. I do not remember all of the points brought up, but would be pleased to answer any question about the plan that has not been explained by Dr. Harris.

Dr. HOWARD: What other form of sewage disposal would be possible? That is not a very great argument in favor of it because it is the cheapest one. Can that water be drained to the Hudson?

Mr. METCALFE: Not without a great deal of expense. It must be at least six miles from the Hudson, and would be prohibitive in cost.

Dr. HOWARD: Would it go by gravity?

Mr. METCALFE: Yes. The Croton Aqueduct is over one hundred feet lower than the level of the lake.

Dr. WAGNER: Are there any intervening hills which would prevent the sewage overflow from going by gravity to the Hudson River?

Mr. METCALFE: I have never looked into it from that point of view. The location of the lake is higher than the other property and that is higher than the river.

The CHAIRMAN: Are there any questions you would like to ask Mr. Metcalfe or Dr. Harris or any further criticisms? One subject I would like to refer to, although I think Dr. Harris has studied it. If any of you heard the late Commissioner of Agriculture talk about the interests of the State, you probably heard him refer to the enormous waste running into millions of dollars in the sewage allowed to go off into rivers and not utilized; and he had a very earnest belief that the time would come when much of the sewage now going to waste would be utilized to make the soil more fertile. Dr. Harris has studied that question and has reached the conclusion that the sewage is of no value in connection with his institution. I should be interested to know whether there is any one here who has considered that question in connection with any of our institutions.

Dr. WAGNER: I may add a word on that. When I went to Binghamton twenty years ago, there were three large separation tanks in which the sewage of the institu-

tion was allowed to discharge, with porous walls separating them into compartments and the solid material was held back and the liquid allowed to flow away into the sewer. Several times this solid material was taken out and used for fertilizer material on the farm. I think there was no question but what the fertilizer was valuable, but the task of taking this material out and distributing it on the lands was so exceedingly disagreeable that the whole outfit was abandoned and direct connections made with the sewers some fifteen years ago.

Dr. MACY: When the sewage disposal plant was installed at Kings Park this matter came up—I might refer to Mr. Horton of the State Department of Health—and there was a very strenuous desire on the part of some particular people to see whether we could not utilize our sewage as fertilizer; but we found this, that there was evidently very good proof collected by the royal authorities in Great Britain and by the authorities in Germany to show that vegetables grown on land that was fertilized by the broad irrigation system, resulted in the propagation of diseases communicable to man, which were more ordinarily the diseases of cattle and horses, anthrax I remember was one of these, and there were several other diseases, and so much attention was given to the study of these matters in Europe that it has led to the abandoning of the broad irrigation system. It seems to me if some way of mechanically precipitating or controlling the sewage and converting it into a different product entirely, it would be worth considering, because there must be a great deal of value in it. But the city of Birmingham in England has abandoned its system of broad irrigation, and a number of prominent systems of Germany have been abandoned in the last few years. This, it seems to me, reduces it to a question of bacteriology, chemistry and mechanics, and I do not think there is anything before the public to show that the sewage can be converted very cheaply into fertilizer without some such danger as I have mentioned, and a danger of that kind would far outweigh the ordinary possibilities you would see in the other direction.

Dr. HOWARD: I would like to say that I wasted considerable time wrestling with chemical precipitation of sewage and that it is a method not to be relied upon.

The CHAIRMAN: Dr. Harris has made note of some of the questions asked which he will answer now.

Dr. HARRIS: Dr. Mabon brought up the question of a nurses' home being separate from that of the employees. It is a point well taken, and it is also an oversight on my part that I did not mention all of the small buildings shown in the outline. We have planned an employees building separate from the nurses.

Dr. MABON: Is the training school separate?

Dr. HARRIS: We have a nurses' home and then an employees' home for male and for females. In reply to the question about kitchens, I will state that each kitchen for each main group will cook for 600 patients, at least. Of course, the kitchens for the infirmary, the tuberculosis and the psychopathic hospitals will necessarily be small and independent, the one of the other. The same will be true of the chronic disturbed group and farm colony.

Dr. Scholer brought up the question of sewage disposal. I think that has been answered by the statement that the water as it leaves the filtration plant for final disposal is rendered inert and harmless, and I am informed that sanitary engineers go so far as to say that it can be taken into the system without any ill effects.

Dr. HOWARD: If that is so, why not let it go into Lake Mohansic?

Dr. HARRIS: Because sewage disposal beds should not be placed within a thousand feet of buildings occupied by patients, and in order to locate them properly at this distance from any house to be occupied by patients, it is necessary to install filter beds on the east side of the east hill and these beds will be 500 to 800 feet away from any source of water supply.

Dr. HOWARD: Is not the real reason because you are afraid of it?

Dr. HARRIS: Not by any means.

Mr. METCALFE: In the spring season it will flow back

into Lake Mohansic. This pond will run over into the lake.

Commissioner BISSELL: Why is that the number of kitchens can not be reduced from seven? You could have more dining rooms and fewer kitchens. Why not reduce the number?

Dr. HARRIS: As is shown in the outline, we will have seven kitchens.

Mr. METCALFE: You mean seven dining rooms.

Dr. HARRIS: No, I mean kitchens. There will be a larger number of dining rooms.

Mr. METCALFE: It is possible to group these two (pointing to plan).

Commissioner BISSELL: Why not do it? I believe every one of us has got to try and operate institutions on an economical basis.

Dr. MABON: I think kitchens can be arranged so as to cook for from 1,200 to 1,500 patients. The work can be done efficiently. It seems to me when it comes to the matter of the force to employ in these dining rooms and the people to supply the relief during absences, it will be very expensive to maintain. In my opinion, you could avoid some of this by having fewer kitchens.

Dr. HARRIS: I want to ask the doctor how you would distribute the food; by underground passages?

Dr. MABON: I am not attempting to discuss in detail a plan of that kind I have never seen before. I would consider how you would do the thing.

Commissioner BISSELL: How many did you propose to have in a dining room supplied from a single kitchen?

Dr. HARRIS: This kitchen will cook for these 600 people in this building; if an extension is made, for 600 more. These groups cook for 600 patients and employees.

Dr. ARTHUR: We have one central kitchen, and we cook for 1,130 people in the one central kitchen with every ease and facility.

Dr. MABON: As an ex-member of the Commission, I would like to say, I think it was the best kitchen and best food service in the State.

The CHAIRMAN: Any further suggestions, or criticisms of Dr. Harris's plan? I see with us a former member of the State Lunacy Commission, and I am sure this conference and members would be very glad to hear a word from Mr. Osborne.

Mr. OSBORNE: I just dropped in to pay my respects and meet some of my old friends. I would hesitate to make any suggestions on the plans. This is only a visit of kind wishes on my part, Mr. Chairman. (Applause).

The CHAIRMAN: Dr. Macy has given a great deal of time and thought to the qualifications which a steward should have and he is going to give us the result of his study of this question. We will hear his remarks and then go into executive session to discuss his recommendations.

Dr. MACY: I was not aware I was expected to prepare a paper. As a matter of fact, I had still to hear from one gentleman whom it was understood I should communicate with in the State in regard to this matter before drawing my final report. Therefore, I would ask you to bear with me in merely placing the matter before you in a more or less off hand way, at present, and giving you some opinions I have collected from others, who know more or less about our work.

The position I have always taken in regard to the office of steward is, that the steward is the general non-medical, executive assistant of the superintendent in all matters relating to the hospital; that he occupies a position of great responsibility and very varied in its character; that he was not only the purchasing agent, but he was the supervising assistant under the superintendent in all non-medical matters, in all work of the various departments, handling employees and controlling all the property, and that he should assist in preserving the discipline and taking care of the ways and means and initiating procedures, looking to better conditions, as much in his way as the superintendent or first assistant does, in either a very general way, or a special way in association with the medical departments. Therefore, it seems to me that an examination which does not take into consideration the broad training necessary for a man to be

able to carry on so many things successfully, is imperfect, and that it is necessary to try and seek the co-operation of the Civil Service Commission in securing a method of examination which will tend to procure qualified men for these positions for certification to us, who are posted in all these lines of work, or, at least, capable of exercising supervisory care, with special information on a certain number of subjects, especially with regard to the care of land, cattle and other matters, as would be necessary in connection with the larger plants. A number of the larger hospitals have anywhere from 100 to nearly 1,000 acres of land that is used more or less for agricultural purposes; large dairies are maintained and while they may have good head farmers, unfortunately many of them seem to be paid less than would command the services of a thoroughly expert farmer. Nevertheless, the duty of general supervision which comes to the superintendent, makes it necessary for him to have the direct assistance of the steward in bringing a great many of these matters to his immediate attention, and handling them, and in such a way not to overburden the steward, who already has so many other duties. Years ago, when I was at Willard, we had a steward who had grown up in that district and who had a very varied amount of information. He had grown up among farming people in a fruit section, where there was considerable dairying, fruit raising and general farming, and Captain Gilbert made at that time, as many of you know, a very efficient and able steward, and when he was finally called from us by death and the task came to me to select a successor, there were at that time few, if any, on the list, whose qualifications had been sufficiently tested, save in regard to matters of clerical ability, for me to feel that there was any safety in selecting from the list, and the result was I declined to appoint from the list certified to me by the Civil Service Commission. I pointed out the insufficiency of the list from my standpoint and asked for a new examination, for which the law provided in such cases. It so happened at that time that the list was headed by a veteran, and there was a good deal of trouble because of this veteran, who sought to impress

every one with the fact that he was being overlooked and I did not wish to appoint him, because of his age and other reasons, and he proceeded to write a great many different people in regard to his wrongs. He stirred up one or two national societies, several State societies; wrote a number of communications to the Governor, and in the end when I still declined to appoint, I was served with a notice from the State Civil Service Commission, informing me that if I refused to appoint, that they would strike from the roster of the State, the names of the people doing the work of this position. I looked up the matter to find that there was such a law in existence, and, being driven to the wall, I asked for a conference with the Civil Service Commission. This was granted me at Rochester. I knew all of the gentlemen who were commissioners, two of them quite intimately. I was very pleasantly treated, but was told the issue was such that they could not waive it at that time; the appointment must be made and the veteran selected under the law. Finding there was nothing to be done, I appointed the veteran, Mr. William Hill, whom most of you know of. He came into the work and was a very pleasant gentleman. He had been a successful business man, I understand at one time, had been a buyer for Claflin & Company of New York, had received a salary of from four to six thousand dollars a year. After losing his health, he took some civil service examinations, qualified as a bookkeeper and was fitted for such service at that time. My relations with him were pleasant. I met him half way and told him I would help him in every way I could, but I was afraid his lack of knowledge in regard to so many matters would prevent his acquiring sufficient knowledge to handle that position as it should be, in the meeting of situations arising in every hospital in the State. He lasted one month and at the end of that month, he took to his bed with nervous prostration and besought me to allow him to resign. I gave him an extended leave of absence without pay, for the reason that the law was just being amended, and the appointment of the present incumbent was afterwards made. After Mr. Hill left, he wrote me a letter in which he stated how

thoroughly he was convinced he was totally unqualified to hold any such position and how clear it was to him then that the Civil Service should have had an examination which should test the qualifications of persons for such an important position. (See my report for the Willard State Hospital for 1902). It is since then, I have made representations to the State Civil Service Commission, when I thought I might have an appointment to make at my own institution. If it is important in the institutions like Willard, Binghamton, Ogdensburg and some of the others with fine land to get a good agriculturist, it is a very much more difficult position on Long Island where we have such a poor quality of soil. This matter was brought up I think, about a year ago by the Commission, later discussed and again brought up this spring, when the Civil Service Commission asked me to state my views on this matter. I wrote them a letter and sent a copy to our own Commission, and the Commission asked me at that time to take the matter up and make a report, after I had ascertained the view of some of the different outside people in the State whom I thought qualified and whose names I mentioned to them at the time of our conference. After meeting with the Commission on this occasion, I began correspondence with a number of gentlemen in the State service in other departments, who had information quite intimately, more or less, about the conduct of the hospital properties in different sections of the State, and among them, I entered into correspondence with a number of gentlemen with whom I had very early come in contact with at Willard. Among these were Professor Moore, head of the Veterinary College at Ithaca; Dr. Jordan, Director of the Experiment Station at Geneva; Professor Bailey, head of the Cornell Agricultural College; Professor Wilhelm Miller, editor of the Garden Magazine, and Commissioner Huson, State Commissioner of Agriculture, and with all these gentlemen, except Dr. Moore and Professor Bailey, I had actual conference, while the matter of taking it up directly with Professor Bailey was unavoidably prevented by circumstances over which I had no control. I have had letters

from all of these gentlemen and I would like to read what they state.

The difficulty of filling a position of this kind acceptably from the civil service lists is because the varied duties of subordinates, over which the steward must have more or less direct supervision and about which he must know and thoroughly understand, in order to be able to properly supervise the work and to report to the superintendent, in regard to the efficiency of the work in the various departments, and not the least in this respect is his duty in regard to the farm, dairy, fruit, orchards, gardens, etc., and the trouble with the old system has been that while we occasionally get satisfactory appointments—and it is true we have succeeded in getting a number of stewards, admirably qualified for their duties—there has been no question that the examination, generally speaking, did not develop whether they had any experience, or ability in those directions, that I lay such stress upon, and I have known one instance, I think it would be enough to speak of that alone, where a young man, who was formerly a messenger boy, under myself, qualified without experience in any of the lines I have mentioned, as resident steward, a position almost analogous to the position of assistant steward now in the service. I think it could be said as a general proposition that, knowledge of the forms and estimates, and knowledge of certain other kinds, of more or less preliminary character, as information or of a clerical nature, has had more stress laid upon it in the formal examinations than upon these other matters which I draw attention to, so much more important. Mr. Hill found himself totally unable to look after the land with the farmer and to determine whether the rotation of his crops or the development of his land, was either good or bad. He had no knowledge of cattle and at that time we were buying on the hoof, and he had no confidence, whatever, in his own judgment. That was an extreme situation, but I doubt if the later lists were examined now, if they would not show a large number of people, who know practically nothing of these important matters.

Speaking of myself, I happen to have more or less knowledge of farming, agricultural life, stock, and I would feel very much dissatisfied over any steward who did not come into the work with considerable information on these lines.

I did not ask any complete reorganization, and I have only made the suggestions I did to the Commission with regard to securing the co-operation of the State Civil Service Commission, so that in future examinations we could begin with a structure that would stand on its own foundation and we could try and get a broader and larger type of men to fill these positions, broader in their training and with more or less fundamental knowledge of these matters which they have soon to take up. I do not think it is desirable to have too much division of responsibility; I think it is perfectly proper and right that the steward should be the general executive and administration assistant officer of the superintendent. I do not consider that general supervision, administrative duties, etc., would conflict with his other duties as purchasing agent of the hospital, if the work is properly arranged and provided for. His duties as purchasing agent are limited very much to-day by our standardizing of supplies of every kind and description and the work of the central purchasing committee, and with an efficient assistant steward in the larger hospitals, who becomes the office man and sees that the estimates and orders are properly prepared. This gives more time for the steward to devote to the work of the different departments and see to their efficiency.* I would like to read the remarks of a few of these gentlemen. (Letters from Messrs. Moore, Miller, Jordan, Bailey and Huson were read.)

I will only add that Professor Jordan thought that he considered an examination into the previous record, capacity and ability of the men taking the examination, would be of more importance than their being able to answer a few questions on agricultural chemistry, rotation of crops, etc. The practical man, allowing everything else be considered, and providing he is well informed, might be just as good a man for our work as many of the graduates of the so-called agricultural colleges.

Professor Jordan in his practical work has found that the examination into the antecedents of the candidate, looking most carefully into what he had actually accomplished in his life, had given him a better clue to the ability of the individual than any other method he had been able to follow.

The CHAIRMAN: Before going into executive session to discuss the doctor's remarks, we might send a message of sympathy to Dr. Hutchings in his illness, which has prevented him from attending this session.

The chair was directed by unanimous vote to send a message of sympathy and regret to Dr. Hutchings.

The conference went into executive session and then adjourned to 9 o'clock the following morning.

MORNING SESSION.

The CHAIRMAN: The conference will come to order. I would ask Dr. Mabon, who is chairman of a committee consisting of himself, Dr. Ashley and Dr. Somers, to make his report on the rules and regulations.

Dr. MABON: The committee has not had time as yet to formulate its final report and I shall give verbally a preliminary and informal report of the progress made. The first question is as to whether it is advisable to have an introductory statement. We have everywhere changed the name of the State Commission in Lunacy to the State Hospital Commission and have inserted and omitted words and phrases where necessary to comply and conform with the revision with the Insanity Law. One paragraph relating to assistant physicians is open for discussion. It says they shall attend to the prescription of medicines, seeing they are properly administered and whenever it is necessary to administer food forcibly, they shall supervise that personally. The question is whether that rule has been fully observed in all places or not. There has been a suggestion that it might be modified. My own belief is that the physicians should supervise the forcible giving of food.

Dr. PILGRIM: I think that is so; if accidents happen, the patients strangle or anything of that sort, it reflects discredit on the management.

Dr. MABON: We have inserted the provisions relating to the principal of the training school, a new position created since these rules were formulated. Everything relating to the purchasing steward has been cut out, as that office no longer exists.

In the rules relating to employees, we have adopted practically everything in the present rules. We advise the omission of rule 33, and a few minor changes have been made.

As to the skilled workmen and hours of labor in the shops, my own belief is that it should be left to the discretion of the superintendent.

Dr. PILGRIM: The question of hours of labor is so affected by local conditions that I believe with Dr. Mabon. When the present rule was adopted, it was left that way, that the question of hours should be left to the different hospitals and superintendents.

Dr. MABON: I think it would be well to leave the rule out entirely. We have put in the gardener, farmer and florist, assigned to duty by the steward with the approval of the superintendent.

We have also put in changes about the employment of patients, only under the supervision of an employee of the institution, assigned for that purpose; that food supplies shall be receipted for after quantity has been counted, weighed or measured, and that the storekeeper shall keep his records of quantities, etc., on the forms provided.

This is only the preliminary report. My own belief is there are not many more changes to be made. We have tried to remedy some of the inconsistencies.

Dr. HOWARD: Kindly explain about the woman physician. Is she an officer?

Dr. MABON: Yes; under the law she is a medical officer.

The CHAIRMAN: You have heard the preliminary report. Are there any suggestions to be made at the present time? If not, I suppose the committee would be very glad to hear from the superintendents at any time later, if anything occurs to them.

Dr. MABON: The committee will gladly welcome any

suggestions that may be made and I hope they may be made soon, so that we can get together and complete the report and present it to the Commission for its action.

In this connection, I would like to ask about the action taken yesterday in regard to the hours of time off. It seems to me this should be considered separately by this committee, rather than with the matter of the rules and regulations and the report thereon. I would like to ask if that is what Dr. Howard had in mind?

Dr. HOWARD: Yes; I would like to ask if the committee could not take up rule 33 relative to the uniforms of attendants and nurses?

Dr. MABON: We thought that would very naturally come up for further consideration. We have not reached any conclusion upon that. We have made the change that the attendants and nurses, when on duty, must wear the prescribed uniform and have stricken out the description.

The rule was further discussed by Drs. Pilgrim, Mabon and Palmer, but no action was taken.

The CHAIRMAN: Mr. Saxton, who is the chief examiner under the Civil Service Commission, has very kindly consented to come before us to-day and speak on the subject of the examination of applicants for the position of second assistant physicians. I know we shall all be very glad to hear what he has to say on the subject.

Mr. SAXTON: I want to say, first, that our Commission is only too glad to have these matters very carefully considered by the State Hospital Commission and the superintendents, individually or collectively. There is nothing we desire more than the hearty and intelligent co-operation of everybody interested. While they are our matters distinctly, and examinations that are held by committees of superintendents or others are held for us and as our representatives, yet as I said before, there is nothing we desire more than, through the suggestions of those most interested, to adopt any modifications or suggestions that seem to promise for the good of the service. I do not know that there is anything I wish to say in regard to this particular matter. A communication was addressed some time ago by our Com-

mission to the State Hospital Commission and a copy of this communication was sent to every hospital superintendent. What we want is, I think, what you all want, simply to establish those conditions of examination which make for the best interests of the service.

If there is any question I can answer, or any information I can give from the experience of our own office, I shall be very glad to do so. I regret that our Commission is not here at present. They met at New York yesterday, and I think all three commissioners and the secretary will be here at 2 o'clock to-day.

The CHAIRMAN: Is there any question the members of the conference wish to ask, or is this a subject you had rather discuss in executive session. If any superintendent or manager has any question to ask, any suggestion to make, now would be a very appropriate time.

It was, on motion,

VOTED, That the conference go into executive session.

The CHAIRMAN: It having been voted that we go into executive session, no printed record of what is said will appear.

(The conference went into executive session and discussed the question of examinations for medical positions in the State hospital service.)

During the executive session, it was on motion

VOTED, That the Examination Committee be requested to take up the matter of relative weights to be given different subjects and qualifications in examinations for medical positions for further elaboration and formulate its findings.

It was also

VOTED, That the Commission be requested to so amend the salary schedule for resident officers, effective July 1, 1912, in the paragraph relating to assistant physicians, after the word "hospital" in the next to the last line, insert the following words: "or psychopathic department of a general hospital."

(INTERMISSION.)

The CHAIRMAN: The conference will reconvene. As you are aware, very important legislation was enacted dur-

ing the past year and Commissioner Bissell has very kindly consented to say a few words in regard to it.

Commissioner BISSELL: I will explain first that the Commission was obliged to leave the conference for the purpose of meeting the Governor regarding one very important branch of legislation, the appropriations for the various hospitals. The Governor is to leave for his vacation on Saturday and all the appropriations are held up to the very end, to see whether or not the income will be sufficient to meet the amount of all the appropriations made. We are anxious to hold all of the appropriations, granted by the Legislature, if possible; but it will be necessary for us to cut our coat according to our cloth, and as the income of the State is fixed at forty-nine millions of dollars, our appropriations are so large that the Governor must proceed very carefully. Certain things must be cut out and we want those things cut out that we can best wait for for another year. That is the reason why we were obliged to leave you a little while ago. As you know, the appropriations this year for this department will be about nine million dollars—our total for maintenance, construction and emergency accounts, and the special appropriations for various purposes. The appropriation bill, providing for the maintenance charges, as passed by the Legislature, will undoubtedly be maintained at exactly the figure in the bill and every one of the hospitals will get the large amounts which have been computed, and which include the additional moneys to pay the higher compensation for services and the increase in employees' wages next spring. The total appropriation for maintenance for the year amounts to \$5,980,611.37. That appropriation will undoubtedly remain at that amount, being, in round numbers, six millions of dollars, a very much larger sum than you have ever had.

The appropriation for the construction and emergency account reaches a total of \$1,702,624. Then we obtained a special appropriation of \$500,000 for the commencement of construction at the Mohansic State Hospital. We have already let the contract for the construction of the railway into the Mohansic site for which we already had an appro-

priation and this year we expect, as Dr. Harris pointed out yesterday, to construct certain buildings—the power house, storehouse, farm buildings, and water and filter and sewage systems. And we will probably have some money over to begin the construction of a chronic group. In addition, we have secured an appropriation of \$115,000 for the purchase of a new site for the Utica State Hospital, the so-called Marcy site, located six miles from the city of Utica. I might state here for the information of the conference, that it was expected when the proposition to move the Utica State Hospital came up, that the old hospital would be abandoned and not used further for the purposes of this department, that it would be devoted to other State uses, but the demands of our department are so great that after conference with the superintendents, who were on the committee on legislation, and our own study of the situation, we decided that we would ask the Governor to permit us to retain the old Utica State Hospital at its present location for the segregation of certain classes of cases of insanity. As you all know, the hospital is well constructed and in good shape for the accommodation of 1,500 patients. We propose the building of a new hospital on the Marcy site and have obtained the options on the lands, and the prices fall within the amount of our appropriation—\$115,000. We are about to acquire that site and begin the construction of that hospital. We included in our appropriation bill an amount, in addition to this appropriation, to purchase the site for the beginning of the construction of the water plant and the extension of the railway spur—which, fortunately, is not very extensive in that case—and for the other things necessary for the beginning of new buildings at Marcy for the new Utica State Hospital.

Of course the most important bill of all this year was the Bayne bill amending the Insanity Law generally. You probably have looked into that bill, as I think copies have been sent to you by the secretary. That bill was the result of the work of the committee on legislation, acting with the Commission—a committee appointed at the Binghamton conference last October, and of which Dr. Mabon

was chairman. It began its work and met the Commission afterwards a number of times and finally agreed upon certain amendments which are embodied in this law, the act being introduced by Senator Bayne. The bill has been passed exactly as it was recommended by the committee and approved by the later conference, with the addition of some provisions that were suggested by the Prison Department and also of some things that came from Bellevue Hospital in New York City.

The first change is the change in the name of the Commission. It was decided that it would be a wise thing to leave out the word "lunacy" in the title because that word has been left out everywhere else in the law. And the Commission is now called the State Hospital Commission. I understand some people raised the constitutional question as to whether or not we could adopt the title of the State Hospital Commission, because the constitution provides that there shall be a State Commission in Lunacy, but we took the advice of the Attorney General, who told us it was perfectly legal and constitutional, because we continue to have a State Commission in Lunacy, in other words, a commission which cares for the lunatics in this State, and we have simply stated that the commission in lunacy shall have a certain designation.

There was another change which excited a good deal of discussion and that was the abolition of the presidency of the Commission. It was done after full discussion with the superintendents of the State hospitals of long experience, because we all realize the fact that there is no difference in the powers or obligations of the three several commissioners making up this Commission. Each Commissioner is charged with the same duties and obligations; each Commissioner is obliged to devote his time and efforts to the work of the Commission in every direction, medical and otherwise. The Commission is made up of a physician, a lawyer and a layman, and it was thought better that there should be no president of the Commission, as there had been back in the early days, when the Commission was organized and the work first began. When State care was inaugu-

rated, the doctor was practically all there was of the Commission, but the work has developed, as you know, and the estimate system has been adopted and the work of this department has developed into a great business department, expending nine millions of dollars the present year and eight millions of dollars last year, and with every form of business, from the construction of a railroad down at Mohansic, the purchase of butter, the preservation of eggs and every form of business activity known to any other great business department. So we have simply decided to have a chairman of the Commission to act in a parliamentary capacity. Of course, there was no intention to change the dignity of the doctor on the Commission, who will be charged with his special work, or to make any changes, except to simply remove the idea that some one man had greater powers than the others. It does not exist in fact, and we believe that it should not exist in the law.

We struck out a provision which was to the effect that we should hold stated meetings at least once in three months, for the Commission now meets practically every day in the year, and the provision as it stood was an unnecessary and absurd requirement. It dates back to ancient history, like the title of president.

The time required of the medical inspector of service in an institution for the insane was made five years. We removed the clause, which prevented us from inspecting and visiting any sanitarium, except those that kept patients for compensation or hire, and we can now send our medical inspector, or we can ourselves visit and inspect any sanitarium where sick and infirm persons are cared for and treated whether for compensation or not. This is with a view to performing this great duty of taking charge of all the insane of the State. We made another change which was discussed at the conference at Ward's Island last winter, as to the limitation in the cost of buildings. We removed the limitation which provided that the cost of buildings should not exceed \$550 per capita, and we can now build fireproof buildings or the best possible buildings for our purposes without any limitation, except the limita-

tion of the amount of the appropriation that we can obtain from the State.

Then we established the Bureau of Deportation in the place of the State Board of Alienists, the idea being to provide not only for doctors on that board, but for laymen, and with a view to extending the work of the deportation of the alien insane. There has been so much discussion of this subject of late, and there will be so much more, that I will not go into the arguments in favor of that change.

We made another very important change for the purpose of aiding us in this work of deportation and also in the work of establishing our claims against the United States Government. We believe we have a large equitable claim on behalf of the State of New York against the United States Government for the care and maintenance of the alien insane for so many years, inasmuch as the United States Government has entire control of the admission of immigrants, and New York City is the largest port of entry, and we have to-day in our hospitals eight thousand alien insane and costing us a little less than two million dollars a year for their care. We have been pursuing this course for many years and we believe that we have a large equitable claim against the United States Government. The United States Government should either build its own hospitals and maintain them (the alien insane) or else pay the State of New York for such maintenance, and as a legal basis, for that claim, we inserted a clause in our law. The hospitals are created for the care and treatment of the poor and indigent insane of the State, and the law read formerly "who were residents thereof." We have changed the clause to read "who are citizens thereof." That allows any taxpayer who is suffering from the burdens of taxation in this State to begin a taxpayer's action to prevent us from taking the alien insane, and while no such action as the exclusion of the alien insane may be contemplated, it gives us a basis for a contest against the United States Government, putting us in a position to insist that it should either take care of the alien insane or pay us the expense we are put to for their care.

I think I have covered most of the amendments of importance; you have considered them before this.

We have appointed a committee of three superintendents to prepare rules and regulations. The change of the name of the Dannemora Hospital for Insane Convicts was changed to read the Dannemora State Hospital. Then there were special provisions for Bellevue Hospital which you will find in the law and which I will not go over, because we did not give that so much attention, believing it was a matter more especially of interest to the Bellevue people. We think this year we have really secured some very important legislation, perhaps more important legislation than has been secured in any year in a long time.

As you know, a bill was passed (and we aided its passage), to secure better compensation for the employees. As we have gone through the hospitals and discussed the question with the superintendents, we have felt that they needed a better class of employees and if they were to get them, they should be better compensated, and fortunately, a measure for higher compensation was passed and the Governor signed it. It will cost the State four or five hundred thousand dollars a year more, but at the same time, we think it is desirable that we should have a better class of employees and better compensation for the work. We are to be congratulated on having that bill become a law.

Then there was an employees' retirement bill passed. It may be that there will be a great deal of difficulty in working it out. We submitted the matter when it first came to our attention to the insurance department, and they made a report which put us in doubt as to whether or not that bill would produce a fund which could be so administered as to provide for the retirement of the employees, at a proper amount, as time went along, but it was decided to put the measure into operation and then perfect it as we go along. A good many questions have already arisen, because the bill was not very well drawn. A good many questions have been submitted to the Attorney General, and I have

here a long opinion, answering these questions. One question was whether officers were included in the benefits of the act. He thinks they were not. It was certainly not the intention to include officers. Then the question as to how the contributions are to be made and from what deductions has been taken up and considered by him, and we have a very full opinion, which will enable us to administer the law in the best way possible at this time, with a view to perfecting it, as errors arise in the future. I think you all agree that this is a very beneficent piece of legislation.

Some other things we did this year, I might speak of. I will speak of the legislation which failed. Several bills were introduced to which we felt great opposition. One was the Shlivek bill, which you will remember was introduced last year and reintroduced this year to permit the miscellaneous visitation of patients, inspection of lists of patients in the public or private institutions on a court order obtained *ex parte*. We opposed that bill and it was defeated. I believe it will come up again. For some reason, some one is anxious to get an opportunity to visit the patients on a court order, obtained without notice.

Then there was a bill introduced by Assemblyman Sweet, providing for the establishment of a new hospital for the insane in the fifth judicial district. We opposed it and it was defeated. We believe that the Utica State Hospital will take care of that district, and we believe that just as soon as the new Utica State Hospital is built, the State will necessarily be redistricted, and that those who are demanding a hospital under this measure will be satisfied.

There was a bill introduced from New York to abolish the Board of Alienists, which has now been changed into the Bureau of Deportation, and place all that work under the care of the health officer of the city of New York. We thought that would be a great mistake and the bill was opposed by us and defeated. I believe, on the whole, we can congratulate ourselves on the work done by the present Legislature, and if we secure all the appropriations we are fighting for to-day, we can be very happy over the prospects for the coming year.

Commissioner Sanger wants me to call attention to the fact that we are striving very hard to increase the receipts from the reimbursing patients. We feel that we have had a good many special agents who have not done their work very well, and we feel that work has not had the close supervision which it should have had, for the reason that it has been in charge of the secretary, who has been charged with a multiplicity of other duties. Therefore, we have decided to put somebody at the head of that work, have a single clerk or agent who would be at the head of these different agents making these collections, getting this information and who would keep track of the records, and follow up very closely these collections. Mr. William G. Dargan of Buffalo, a young lawyer, was appointed, a man I know personally to be very good at this collection work and who will be very faithful and efficient. He will visit all the hospitals and take the matter up with the stewards, and we would like the close and earnest co-operation of the superintendents and the stewards with Mr. Dargan and the agents for the purpose of getting the information more accurately as to the capacity and ability of people to pay, and then to collect the moneys due; and we have every hope we can increase the amount collected very largely in the coming year, and from what I have heard of the work already done, I am satisfied we are going to make a great many collections that have been overlooked in the past.

Dr. MABON: On the books of our hospital there is a long list of delinquent people. Many of these people can not pay and many of them are contingent, and it seems to me those should be struck off or placed in some other book, so that we do not have uncollected three or four hundred thousand dollars. That should be met, it seems to me, through this agent and the Commission. It is a matter we write the Commission about a great many times.

Commissioner BISSELL: I had an idea that it would be well for this new man now to keep a separate list of those contingent items, a good deal as a lawyer in his office keeps an old list of judgments that he has not been able to get anything out of, thinking that something may happen,

somebody may die and leave the man some money, and eventually these judgments or old claims can be collected. These old items could be kept in a suspended list and we need not bother with them, except as by watchfulness we find something can be collected.

Dr. MABON: Our own people can follow up the cases on the books without having to wade through the other books.

Questions relative to the retirement fund were raised by Drs. Elliott and Howard and the matter was discussed by Drs. Mabon and Pilgrim and Ashley.

Commissioner MAY: A great many inquiries have already been addressed to the Retirement Board raising many points, and those points, as suggested by Dr. Mabon, will have to be passed upon by the board. The board will have to prepare a set of rules and regulations which will necessarily have to be provisional for a certain length of time. The bill was very poorly drawn and is conflicting in some respects and it is going to take some time to get this scheme in successful working order. I think if all the different institutions would put in writing any question which involves the operation of this act and address those questions to the Retirement Board, they could make some ruling on all the points involved and prepare some rules and regulations to direct them in their future conduct. I might say also that copies of this opinion of the Attorney General have been prepared and will be forwarded to each hospital.

The CHAIRMAN: I would like to call your attention to the fact that as the superintendents are all aware, the Commission has adopted the rule of greatly increasing the responsibility of the superintendents in regard to estimates, leaving upon them the duty of determining in a very great measure what they ought to have and refraining from passing upon small, or if possible, large, accounts which are matters of discretion. Of course, the prices of food have gone up and we regret to find that the expenditures for the last quarter are about one hundred thousand dollars greater than the expenditures for the similar quarter, a year ago; we want to remind the superintendents how much we lean upon them, how much we hope for their hearty co-operation

in an effort to effect all reasonable and proper economies that will not interfere with the proper management of the hospitals. Before the conference adjourns, we might go into executive session in case there are any questions anyone present wishes to bring up. Is there any matter which anyone wishes to discuss in executive session? Is there any further business of any character to come before the conference? If not, a motion to adjourn will be in order.

On motion, duly seconded, the conference then adjourned.

LEWIS M. FARRINGTON,

Secretary of Conference.

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MENTAL DISEASES AND CRIMINAL RESPONSIBILITY.*

BY JAMES V. MAY, M. D.,

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A crime as defined by the penal code of New York includes any prohibited act or omission punishable by law on conviction and may be an offense against either the State or an individual. The mere performance of an act forbidden by the statutes does not, however, constitute a crime unless accompanied by an unlawful intent. Liability to punishment presupposes, moreover, mental competency in a free agent of mature years and discretion. Criminal acts necessitating a determination of responsibility are usually either:

1. Crimes against the person, as suicide, homicide, kidnapping, assault, robbery, etc.

2. Crimes against the person and against public decency and good morals, as rape, abduction, seduction, adultery, abortion, bigamy, incest, sodomy, indecent exposure, obscene exhibitions, etc.

3. Crimes against public health and safety.

4. Crimes against the public peace.

5. Crimes against property, as arson, burglary, house-breaking, forgery, larceny, malicious mischief, etc.

6. Cruelty to animals.

A proper consideration of the subject of responsibility for criminal offenses is impossible without some knowledge as to the various conditions and etiological factors to which crime is attributed. One of the earlier investigators in this field was Morel, who saw in the criminal a personification "of the various degenerations of the species". Maudsley and Pritchard advanced the theory of moral insanity, a condition described by Abercromby as one "in which all the upright sentiments are eliminated while the intelligence presents no disorders". A more elaborate investigation

* Read at the International Extension Course on Nervous and Mental Diseases, Fordham University, September 23 and 24, 1912.

by Lombroso resulted in the announcement of the "atavistic" doctrine, atavism being a reversion of man to the primitive and alleged savage type represented by his early ancestors. This theory was based on a study of the anatomical, physiological and psychological traits exhibited by the primitive races. His classification included the occasional, the emotional, the born criminal, the moral insane and the masked epileptic. The speculations of Morel regarding degenerations were subsequently reduced to more scientific specializations by later advocates of the same school. Marro found an anatomical basis for crime, ascribing it to a defect of nutrition in the central nervous system. Bonfigli, on the other hand, located the lesion in the inhibitory centers. Enrico Ferri made a distinction between criminal lunatics and emotional criminals. He defined crime as "a phenomenon of complex origin and the result of biological, physical and social conditions". "Habitual criminals," he says, "are the victims of a clear, evident and common mental alienation which causes the criminal activity," while, on the other hand, the occasional offenders are due "to the impulse of opportunities more than the innate tendency that determines the crime." The emotional criminal is the sane and moral man overcome by momentary emotional paroxysms constituting, as Ferri expresses it, a "psychologic storm". In marked contrast to these views is the natural crime theory of Garofalo—"an offense against the fundamental altruistic sentiments of pity and probity". To him a transgression of the law was an indication of a loss of the proper sense of appreciation of the life or property of another, a moral anomaly. Moral insanity as conceived by Maudsley, Galton and others is only a variety of the so-called degenerative states. To the Italians are we indebted for the announcement that criminal tendencies are only symptomatic expressions of epileptic conditions. Another explanation, also on a pathological basis, is the neurasthenic theory of German origin. Sociological research attributes crime to influences which overcome the natural resistance of the individual, a variation from which is merely an inability of the person to conform

to the laws of environment. Max Nordau rejects all of these hypotheses and concludes that all human weaknesses are to be traced to an abnormal development which he terms "human parasitism". Still others find that criminality is merely a natural product of the modern economical and social system. Colajanni ascribes alcoholism, vagrancy and prostitution to poverty, but crime he says is "due to necessity and to the degree and kind of education received".

As a result of modern research we can go much further. In the light of our present knowledge we are justified in saying that crime is the result of constitutional defects in the form of hereditary tendencies and arrested mental development, educational defects, a deterioration of habits as shown by alcoholism, etc., accidental influences such as environment and deprivation, pathological conditions including epilepsy and insanity and precipitating factors arising from emotional disturbances. These fundamental causes may operate separately or exist conjointly in the same individual. Criminality and poverty are quite closely associated in many instances. The exact significance of this fact is, nevertheless, not clear. It is a coincidence to which too much importance should not be attached, but is correlated with crime to the extent at least of acting as an exciting cause. The influence of environment can not be questioned. It is difficult for even the normal, well balanced individual to rise above his surroundings, and doubly so if educational facilities and financial advantages are denied him. The sexual perversions so common in reformatories and prisons are undoubtedly due largely to association. The deleterious effects of prison surroundings are unquestionably a factor in recidivism. While the evidence as to the influence of associations with criminals is not conclusive, it is significant. It is interesting to note that of 4,570 convicts in the New York State prisons in 1911, 1,856, or 40.6 per cent, had served terms in other penal institutions and 761, or 15.6 per cent, had previously served two or more terms of imprisonment.

The criminal is almost invariably deficient in education. This is due partially to mental inferiority, which renders

any advanced intellectual development difficult, and to a certain extent to lack of opportunity. Sutherland reports that of 188,678 convicts in England in 1907 less than one per cent had a higher education, 24 per cent could read and write well, 78 per cent could read and write imperfectly, and 19 per cent were entirely illiterate. Fifty-five, or 1.2 per cent of the 4,570 inmates of the New York State prisons in 1911 were college graduates or had a collegiate training, 173, or 3.7 per cent, had an academic or high school education, 2,499, or 54.6 per cent, had a common school education, 1,085, or 23.7 per cent, could either read or write or both, and 758, or 16.5 per cent had no English education whatever. The influence of institution training on criminals is well illustrated by the excellent results obtained in the higher type of our modern reformatories. The delinquent classes, as a result of poverty and ignorance, are often unfitted for the struggle for existence and have no trade or any means of earning a livelihood. This is of significance not only in accounting for the overcrowded condition of our prisons, but suggests a remedy which should be utilized to much greater advantage.

Alcoholism has long been recognized as one of the important causes of crime. Bianchi quotes various authorities as attributing criminal offenses in France to alcohol in 45 per cent of the cases reported, in Hungary to 35 per cent, in Switzerland to 42 per cent, and in Sweden to 71 per cent. These statistics are startling in the extreme and suggest the possibility of an exaggeration of the actual facts. Baer, however, estimates that 41.5 per cent of all crime can be ascribed to alcoholism. An investigation by the Board of Public Charities of Pennsylvania in 1890 showed that 82.7 per cent of all the persons committed to the penitentiaries in that State were addicted to the use of alcohol and 87 per cent of those sent to the county jails and workhouses, and 42 per cent of the youths admitted to the Huntingdon Reformatory were victims of the same habit. In 1880, after a careful study of the situation, the Massachusetts Bureau of Statistics reported that 60 per cent of the crimes in Suffolk County and Boston for the preceding

twenty years were due directly or indirectly to alcoholism. It is probable that these figures include all cases where intoxicants were indulged in to any extent at all. The official reports of the prison department of the State of New York for the year 1911 show that 21.1 per cent of the inmates were intemperate in their habits prior to conviction. Clarke found that of the criminals at Wakefield, England, 43.5 per cent had fathers who were alcoholic. The relation between alcoholism and mental defects is shown by Fuller's investigation of the reformatory class in England. Of the cases under treatment (for alcoholism) from 45 to 50 per cent were below the normal mental standard and from 15 to 20 per cent were either imbeciles, epileptics or insane.

Owing to the influence on criminality of the transmission of mental defects, insanity and susceptibility to alcohol, the study of heredity becomes a subject of great interest. Although this has always been looked upon as a factor of no small consequence, its importance was not fully realized until the Mendelian theories were recently adapted to this field of research. Mendel's studies of plant life led him to the discovery that many of their important characteristics were due to inherited tendencies or influences. A thorough investigation resulted in definite laws which were clearly shown to be responsible for certain family peculiarities. These studies were extended to animal life and finally to man. The elaborate researches of Davenport are now so well known that it is not necessary to go into any detailed analysis of his findings. His studies of heredity have thrown much light on the determination of such family characteristics as the stature, the color of the hair and eyes, literary and artistic ability, mechanical skill, temperament, etc. The transmission of defects of various kinds has been shown to follow definite laws. This has a most important bearing on the consideration of criminality, mental inferiority, nervous diseases and insanity. The transmission of criminal tendencies from generation to generation would appear to be more than probable. Careful statistics have been compiled showing the history of several defective families with criminal propensities. Dugdale found that in

the course of 100 years the Juke family included 310 inmates of poorhouses, 50 prostitutes, 60 thieves and 130 convicted of various crimes. Stocker of Berlin reports 834 descendents of two sisters and estimates that 76 had served prison terms aggregating 116 years, 164 were prostitutes, 106 illegitimate, 142 beggars, 64 paupers and 17 sexual perverts. Sichart, the director of prisons in Würtemberg, came to the conclusion that, of 1,714 prisoners under his supervision, one-fourth had received a defective organization from their ancestors. Vergilio found that 32 per cent of the criminal population in Italy showed evidences of inherited tendencies in that direction. Certainly heredity must be accepted as exerting a noteworthy influence on the criminal and delinquent classes. It is, moreover, an important etiological factor in the production of mental defectives and the insane and is entitled to due consideration. McCulloch, of Indianapolis, who has information regarding four or five generations of the Ben Ishmael family of Kentucky, shows that it includes 121 prostitutes, several murderers, a large number of thieves and many other criminals. Goddard has shown from a study of feeble-mindedness in over 200 families that hereditary causes were concerned in 65 per cent. One family showed 27 feeble-minded persons in four generations. In another he found records of 286 persons of the same class. His examination of children in three large reformatories showed that 25 per cent of the inmates were of defective mentality. Of 100 consecutive admissions to the New Jersey State Reform School for boys 26 were decidedly below the normal standard. Fifty-two of 56 girls from the Massachusetts Reformatory were defective on examination. Of 100 children in the detention home of the Newark Juvenile Court Goddard was able to find only one normal mentally, while 66 were decidedly feeble-minded. Dr. Christian, of the Elmira Reformatory, informs me that studies of over 12,000 of the delinquent class show 42 per cent to be defective. He states further that 50 per cent of those who have violated their paroles from that institution were unquestionably irresponsible. Sutherland states that one-third of the

recidivists are such as a result of mental defects and that two-thirds of the petty offenders are inferior. Healy, as the result of a study of 620 juvenile delinquents in Chicago, found that 26 per cent were feeble-minded. The importance of these statistical studies can not be exaggerated. The juvenile delinquents of to-day are destined to be the future occupants of our prisons. It is merely a question of time. Eleven and four-tenths per cent of the 1,528 convicts in Sing Sing, 28.6 per cent of the 1,213 in Clinton Prison, and 53 per cent of the 1,032 occupants of the Auburn State Prison have previously served in institutions of the reformatory type.

Unfortunately careful studies of the mental capacity of the adult criminals in our prisons and other penal institutions are not available. The British Royal Commission for the study of the feeble-minded decided from a very cursory examination that 10 per cent of the English convicts were inferior mentally. The statement that from 30 to 40 per cent, at least, of the inmates of our prisons are constitutionally inferior is, I think, a conservative estimate. Every effort should be made to encourage a systematic investigation of the criminals in our State institutions to determine accurately their mental status. Although these individuals have been convicted of crime by courts of competent jurisdiction and are, therefore, to be held as criminally responsible for their acts, the overwhelming evidence as to the influence of heredity and inferiority on crime must inevitably lead us to the belief that many of these persons become criminals as a result of conditions which are entirely beyond their control. A readjustment of the views we now entertain is essential to an impartial administration of justice. Competency and responsibility are primarily medical and not legal problems and should be recognized as such. Liability to punishment for criminal acts should be assumed to depend upon the possession of a normal mental development with unimpaired judgment and self-control. There is at present no definite standard by which mental development can be mathematically registered. In the study of juvenile delinquents the Binet and

Simon tests have been very satisfactory. As Dr. Goddard has covered this ground exhaustively it will be unnecessary to go into any details regarding technique or the results which may be obtained. Experience has demonstrated beyond any question the adaptability of the methods of Binet and Simon to the study of the juvenile mind. It does not, however, place at our disposal an adequate and satisfactory method of arriving at any definite conclusions as to the responsibility of adult offenders.

A scheme of examination recently proposed by Fernald is worthy of serious consideration. This embraces a series of tests for the higher mental processes, including the will, the attention, the memory, ethics and the power of association of ideas. It is obvious that an educational test must necessarily be limited in its adaptability to the study of the adult criminal. Fernald estimates the individual's determination or will power by what he terms the "achievement capacity test". He describes this as a method of computing the "endurance of the will, measured in terms of muscle fatigue in units of time". In arriving at this he ascertains how long the individual can support himself standing erect with his heels one-quarter of an inch from the floor. The defective is found to lack in determination and succumbs to this exertion in a much shorter time than the normal individual. Physical as well as mental factors would appear to be concerned in such an estimation, the value of which is somewhat questionable. The attention is tested by a modification of the Woodworth cancellation scheme. A printed sheet with twenty lines containing fifty numerals each is given to the subject and he is asked to cross off with a pencil all of the threes, fives, sevens or nines on the paper. The number of errors and the time required are both recorded. This is followed by several simple calculations. The prisoner is asked to count backwards from twenty to zero by twos or from thirty-one by threes. The number of correct answers are noted and the time is also considered. As abnormal reactions have been reported in feeble-minded and delinquents by Eastman and Rosanoff the association test may also be utilized. It has been found that there is

often an inability to co-operate and a failure of reactions due to lack of familiarity with the stimulus word. There has been a large percentage of non-specific and certain types of individual reactions. These conclusions were based on an examination of 253 subjects. The memory is tested by Fernald by showing the prisoner ten picture postal cards and then requiring him to identify them after they have been included with ten others with which he is not familiar. The number of correct recognitions is recorded. The ethical perceptions are determined by giving the prisoner a series of ten questions which should demonstrate his ability to discriminate between right and wrong. After a reasonable amount of time has elapsed his answers are recorded. The prisoner is next given a tabulation of ten criminal offenses and asked to arrange them in accordance with his ideas as to the order of their gravity. There are no time limitations for this particular test. As a result of a study of 100 criminals by this method Fernald concludes that by computations based on the efficiency scores obtained the relative standing of each individual may be mathematically determined. The degree of defect is based entirely on the estimation of mental efficiency and will not definitely measure criminal responsibility.

The care of the defective classes has long constituted a serious problem in the management of prisons and reformatories. Reference has already been made to the large number of these individuals included in our prison population. Even a casual observer will note without difficulty in our penal institutions the frequency of cranial malformations and abnormalities, peculiarities in the teeth, ears and jaws, facial asymmetries, congenital defects, the low stature and other striking characteristics so common to the criminal. There is a group of traits which, although well defined in the convict class, can scarcely be attributed to viciousness or moral depravity. The prisoner is usually a person of little education and without ambition to acquire knowledge. Often the ability to learn is narrowly limited, although many exhibit a superficial brightness which is frequently deceptive. As a general rule will power is conspicuously

lacking. This is shown by an unusual susceptibility to alcoholism and by the frequency of opium and other drug habits in our prisons. Judgment is almost uniformly defective as indicated by recidivism and the refractory tendencies which result in repeated punishment and the unnecessary loss of privileges which should be appreciated by those who have so few within their reach. In the majority of our penal establishments every inmate has the opportunity to master a trade which might readily enable him to readjust himself to his surroundings on the expiration of his term of imprisonment, and place at his disposal a ready means of earning a livelihood only too often entirely disregarded. It is not by any means to be understood that this is a universal characteristic of convicts. There is, however, always a certain percentage of persons who are absolutely unable to adapt themselves to prison discipline even where it is so obviously to their own advantage to do so. This can only be ascribed to an intellectual deficit or an arrest of mental development, however characterized. This has often been referred to as one of the higher degrees of imbecility. Every penal colony includes persons who are proud of their criminal record and the originality or daring of their crimes. They associate only with kindred spirits and are given to foolish boasting and conspicuous clothing. Some are inappreciative of any kindness shown them or any effort to assist them to a higher plane of living. There is a tendency on the part of many to uncalled for and unprovoked cruelty to others and an evident lack of sympathy or an appreciation of any of the refinements of higher civilization. Although many are quick to avail themselves of an opportunity to attend religious services and evince a great interest in moral reform, it is only too often lost sight of on the expiration of their term of sentence. The moral tone of the defective delinquents is noticeably low. They are usually cunning and deceitful and do not hesitate to prevaricate on all occasions, even when it would be to their own interests to adhere to the truth. They are quick to notice and condemn the shortcomings of others. They are susceptible to sexual excesses

and prostitution is common in the females, while perversions are not rare. Theft is exceedingly frequent among criminals.

The defectives often show a surprising degree of egotism with a superficial familiarity with legal phraseology and usually strenuously insist that they are unjustly detained. Considerably less than fifty per cent of convicts admit their guilt even after conviction in court. The inferior criminal is often uncleanly in his personal habits and is not amenable to the rules of the institution. Although professing a great regard for parents and for other relatives for whom they feel a great responsibility while confined, they show little interest in their family ties when at liberty. This class of criminals show no appreciation of the gravity of the deeds with which they are charged and exhibit no evidences of remorse even for homicide. They will discuss freely the most atrocious acts and justify them in various ways. Others claim that they were drunk or "crazy" when their crimes were committed and it is not at all infrequent for them to deny any recollection of the offense in question, although a close examination shows that every detail is preserved in their memory. A few have no apparent sense of discrimination between right and wrong and see no abnormality in any crime whatever so long as it is not detected. Even when responsible for most vicious attacks on others it will be found that they are decidedly cowardly in disposition and can not withstand physical punishment. As a general rule they exhibit lack of self-control and are irritable as well as profane. They almost invariably feel that they are the victims of persecution by organized society and are oppressed by hardships which render a criminal life not only justifiable but absolutely unavoidable. These individuals are rarely capable of any sustained or prolonged effort and can not, as a rule, accomplish anything requiring close application. They are strongly disinclined to any variety of manual labor. It is frequently a marked susceptibility to suggestion that leads them to crime.

It is not to be assumed that the defective criminal combines all of these well developed characteristics. In the

higher grades we find individuals without any physical stigmata who have had an ordinary school education and who possess none of the qualities noted except a predisposition to crime and an inability to adjust themselves to any other mode of life. On careful investigation and examination, however, they are very liable to exhibit some of the evidences of constitutional inferiority. They usually express great regret at their past lives when they find themselves liable to punishment, with every evidence of remorse but no power to reform.

It is quite evident, I think, that no one or even series of arbitrary educational or psychological procedures for the mathematical estimation of the mental capacity will definitely determine the responsibility for crime in the class of defectives described. The family history must be considered, the educational opportunities and the mental grasp ascertained, and due weight assigned to the ability to cope with the problems of everyday life, the disposition to conform to social and moral requirements, the judgment, will power, self-control, sense of ethical discrimination, emotional endowment, susceptibility to alcohol, adjustment of the sexual relations, tendency towards criminality, and numerous other factors. The existence of a psychosis must be eliminated. It is hardly necessary to say that, notwithstanding the legal aspects of criminology, no insane person should be held responsible for the commission of crime.

Our present knowledge of the transmission of tendencies to alcoholism, criminal acts, sexual excesses, etc., should not be entirely disregarded in a determination of responsibility in a given case. The relation between mental defects and crime is not by any means a recent discovery of the psychiatrist, although not sufficiently emphasized heretofore. Maudsley, in speaking of responsibility, says: "All persons who have made crimes their study recognize a distinct class of beings, who herd together in our large cities in a thieves' quarter, giving themselves up to intemperance, rioting in debauchery without regard to marriage ties or the bar of consanguinity, and propagating a criminal population of degenerate beings. For it is

furthermore a matter of observation that this criminal class constitutes a degenerate or morbid variety of mankind marked by peculiar low physical and moral characteristics . . . as a class they are of mean and defective intellect and not a few of them weakminded or imbecile . . . 'The children, who become juvenile criminals, do not evince the educational aptitude of the higher educated classes; they are deficient in the power of attention and application, have bad memories and make slow progress in learning; many of them are weak in mind and body and some of them actually imbecile.'

Devendorf summarizes the modern conception of this condition as follows: "In the mental field the stigmata vary from the more or less complete arrest of development of the intellect and the moral sense to mere anomalies of those faculties. The arrest of development may be both intellectual and moral, producing imbecility and idiocy, or may involve only one of these fields, as in the case of moral imbecility. However, when the moral defect is very pronounced, more or less intellectual enfeeblement accompanies it. The mental impairment is usually general and involves all the more complicated mental processes: apprehension, memory, judgment, association of ideas, emotions and volitions."

Recently this condition has been characterized by the significant term "Constitutional Inferiority" as proposed by Adolf Meyer and suggested by Koch's critical study in "*Die Psychopathischen Minderwertigkeiten*" in 1893. In the words of Talbot, "Between the feeble-minded and the normal individual occurs a group whose general characteristic is, as was pointed out by Magnan, a disharmony and lack of equilibrium, not only between the intellectual operations, properly so called, on the one hand, and the emotions and propensities on the other, but even between the intellectual faculties themselves". Constitutional inferiority is embodied in the official classification of insanity in the State of New York as applied to a "general and uniform deficit in the mental endowment and a noticeable restriction of the intellectual capacity". As contrasted with psychopathic inferiorities it is defined as "intellectual

deficiency of a mild degree to which may be added neurotic traits, signs of emotional instability or moral defects". Transitory attacks of excitement or depression, paranoid states and hallucinatory episodes are frequent developments. The fact that many of these persons are unable to care for themselves is shown by the admissions diagnosed as constitutional inferiorities and disorders in the New York State Hospitals. There were 163 of these in 1909, 216 in 1910, and 236 in 1911. The relation between this defect and criminality is shown by the fact that of the 47 admissions to the Matteawan State Hospital during the year 1911 eight, or 17 per cent, were recognized by the staff as cases of constitutional inferiority. These were committed by the courts and found to be mentally incompetent at the time of trial. Their crimes may therefore be assumed to have been due to episodes of various kinds consequent upon their mental inferiority.

That this condition is also an important factor in the psychoses occurring in convicts is clearly shown by the statistics of the Dannemora State Hospital. The superintendent of that institution, Dr. Charles H. North, in his annual report for 1909, states that 24, or 31 per cent of the 76 admissions during one year were reported as cases of imbecility and idiocy with insanity. He says, however, "No patients are admitted exhibiting the degree of mentality to which the word idiocy is commonly applied, and the word imbecility is used in a somewhat broader sense than is generally understood, or that was at one time given it by the medical officers here in recording cases. Not infrequently patients are admitted to this hospital who may, in many respects at least, appear to be of fair intelligence, and to whom the casual observer would hardly think of applying the word imbecile, but who are nevertheless found, upon close acquaintance, to be so defective as to require such designation. The defect may be moral in its nature, though it is usually accompanied by other indications of constitutional inferiority These patients, whose average age is about twenty years, are, for the most part, the product of bad heredity, a bad

environment and a faulty early training, though some of them have had a fair chance in life. They prove to be unequal to the requirements of reformatory routine, requirements which are readily met by the general run of inmates, become depressed, and later, in many of the cases, exalted." Twenty-four of the 76 admissions in 1909 were included in this classification, 18 of the 57 in 1910 and 20 of the 84 in 1911, a total of 62, or 28.5 per cent, of 217 cases in three years.

There can be no question as to the influence of mental inferiority on the admissions to the institutions for the criminal insane. It is fair to assume that the crimes committed by these persons were directly or indirectly a product of their inferior development, and it would seem equally fair to assume that as a natural consequence their responsibility was at least limited. It is to be remembered that these persons were regarded as responsible for their acts by courts and committed to reformatories or prisons.

I have so far endeavored to show:

First, that the investigations of criminologists, whether they ascribe crime to atavism, degeneration, parasitism, moral insanity, neurasthenia or epilepsy, invariably suggest heredity and mental deficiency as prominent factors.

Second, that alcoholism, poverty, vagrancy, insanity and prostitution are closely associated with inferiority and criminality.

Third, that recent researches show that a large percentage of delinquents and criminals are mentally defective and that heredity is a common cause of this defect.

Fourth, that the criminal acts committed by persons of this class are often due directly to an arrested mental development and that constitutional inferiority must be reckoned with as etiologically responsible for crime in many instances.

A definite relation between crime and more fully developed mental alienation in the form of actual psychoses can also be demonstrated. During the year ending September 30, 1911, 68 cases were admitted to the Matteawan State Hospital in which the criminal acts committed can

with a reasonable degree of certainty be attributed to insanity at the time of the offense. The forms of insanity represented are of interest. Six were cases of general paresis, 6 of alcoholic psychoses, 27 of dementia præcox, 7 of paranoic conditions, 5 of manic-depressive insanity, 11 of constitutional inferiority with psychoses, 2 of epileptic insanity and 3 of imbecility with insanity.

Dr. John W. Russell has reviewed 576 of the unconvicted cases at Matteawan and reports the diagnosis and percentages of the total number as follows.

PSYCHOSIS	NUMBER	PER CENT OF TOTAL
Dementia præcox (hebephrenic form)....	42	7.4
“ “ (catatonic form).....	13	2.2
“ “ (paranoid form).....	62	10.7
“ “ (unclassified)	122	21.1
“ “ (total)	239	41.4
Allied to dementia præcox.....	1	.1
Alcoholic psychosis (deteriorated type) ..	26	4.5
“ “ (paranoid form).	31	5.3
“ “ (unclassified)	44	7.6
Acute alcoholic hallucinosis.....	7	1.2
Chronic “ “	13	2.2
Alcoholic conditions, total	121	21.1
Toxic psychoses (drugs)	4	.7
Paranoic conditions.....	40	6.9
Manic-depressive insanity.....	17	2.9
Epileptic psychoses.....	24	4.1
General paresis.....	14	2.4
Senile psychosis.....	4	.7
Undifferentiated depressions	18	3.1
Psychoses accompanying various nervous diseases.....	1	.1
Imbecility with excitements.....	41	7.1
Constitutional inferiority.....	39	6.7
Not insane.....	13	2.2

In the order of their frequency, then, the psychoses occur as follows: dementia præcox, alcoholic conditions, imbecility and constitutional inferiority, paranoid states, epileptic insanities, manic-depressive forms and general paresis. The defective group, including constitutional inferiority and imbecility together, constitutes 13.8 per cent of the total and ranks third, an important fact. The undifferenti-

ated depressions undoubtedly include some cases of involutional melancholia. The presence of thirteen not insane, although comprising only 2.2 per cent of the whole series, is of some significance.

In 1,780 admissions during the seventeen years ending in September, 1905, 65, or 3.8 per cent, were diagnosed as epilepsy with insanity and 63, or 3.5 per cent, were cases of general paresis. Of 177 admissions from October 1, 1905, to September 30, 1911, 43, or 24 per cent, were diagnosed as alcoholic insanity. Of 3,247 admissions between 1859 and 1910, 1,526, or 46.9 per cent, were noted as being intemperate in their habits. One hundred and fifty-five, or 5.9 per cent, of 2,595 cases from 1875 to 1907 were reported as cases of imbecility with manic attacks. From October 1, 1905, to September 30, 1910, 38, or 8.3 per cent of the 457 admissions were classed as cases of paranoia. Of 2,595 cases admitted from September 30, 1875, to September 30, 1907, 210, or 8 per cent, were ascribed to heredity or congenital defects as etiological factors. Of the 793 admissions from October 1, 1888, to September 30, 1910, in which definite information could be obtained, hereditary tendencies were found in the paternal branch of the family in 108 cases, in the maternal branch 141, and in both paternal and maternal in 31, a total of 280, or 35 per cent. Hereditary tendencies were found in collateral branches of the family in 127, or 16 per cent, of the cases admitted, making a total of 407, or 51.3 per cent of the 793 cases in which definite information was available.

At the Dannemora State Hospital only convicts are admitted who become insane while serving a sentence in prisons or reformatories. During the five years ending September 30, 1911, of the 356 admissions 100, or 28 per cent, were diagnosed as suffering from imbecility or idiocy with insanity. This group is very largely composed of cases now classified as constitutional inferiority. It is not unreasonable to assume that there was a definite association in many of these cases between the crime for which they were convicted and their mental defects, which were, of course, congenital. One and nine-tenths per cent of the

cases were diagnosed as paranoia which may or may not have antedated and accounted for their crimes. Twenty-seven per cent of the admissions were paranoic conditions and 22 per cent cases of dementia præcox. These probably represent prison psychoses largely.

We have much more valuable statistics as to the forms of crime committed by those not legally held responsible. From February 2, 1859, to September 30, 1910, 925 persons were admitted to the Matteawan State Hospital, having committed criminal offenses attributable to insanity. The more common crimes with the percentage of the total number represented are as follows:

CRIME	NUMBER OF CASES	PER CENT OF TOTAL
Arson.....	43	4.6
Assault.....	106	11.4
Assault and battery.....	19	2.
Assault to do bodily harm.....	29	3.1
Assault with intent to kill.....	48	5.1
Assault, 1st and 2d degree.....	41	4.4
Assault, total.....	243	26.2
Burglary.....	63	6.8
Burglary and larceny.....	10	1.
Burglary, total.....	73	7.8
Forgery.....	14	1.5
Intoxication.....	15	1.6
Grand larceny.....	76	8.2
Petit larceny.....	10	1.
Larceny, total.....	86	9.2
Manslaughter.....	13	1.4
Murder.....	175	18.9
Murder, attempt at.....	14	1.5
Murder, 2d degree.....	6	.6
Homicide, total.....	208	22.4
Rape.....	19	2.
Rape, attempt at.....	11	1.1
Rape, total.....	30	3.2
Robbery.....	13	1.4
Sodomy.....	13	1.4
Suicide, attempt at.....	9	.9
Vagrancy.....	39	4.2

The more common crimes, therefore, in the order of their frequency are assaults of various degree, murder, manslaughter, etc., larceny, burglary, arson, vagrancy and rape.

A study of the psychoses exhibited by criminals found insane at the time of their offense and therefore absolved of any responsibility by the courts is, it must be confessed, somewhat surprising. The frequency of dementia præcox is quite unexpected. In manic-depressive cases infractions of the law are liable to occur during the elation of the manic stage and assume the form of vagrancy, intoxication, assaults, arson, robbery or larceny, usually minor offenses. Attempts at suicide may occur during the depressive stage but are much more common in involution melancholia and are rarely noted in dementia præcox. The dangerous form of the latter disease as far as criminal offenses are concerned is the paranoid variety. Many of these cases have been classified heretofore as paranoics and the modern conception of this disease will render new statistical studies necessary. In the paranoid form of dementia præcox, arson, homicide and assaults occasionally occur as a result of delusion formation and persecutory ideas, while the crimes of the manics are merely due to an explosion of mental and motor activity. Where the deterioration is slight the possibility of crime is greater. In the advanced stages of the hebephrenic and catatonic psychoses assaults represent sudden and uncontrollable impulses, but lack the intent which the law associates with crime. In the slowly deteriorating forms of dementia præcox sexual perversions are not infrequent, but such cases usually attract attention early and are committed to institutions before becoming dangerous. Curiously enough criminal acts occur in a small percentage of cases of general paresis and senile psychosis. These are liable to be offenses against common decency, arson, intoxication, vagrancy and, rarely, homicide.

There is, perhaps, no more dangerous class of criminals than the chronic alcoholics. They frequently exhibit few evidences of insanity which are demonstrable to the lay mind and often escape detection owing to the fact that they frequently show little amnesia or disorientation and soon learn to conceal their delusions. The characteristic features of their insanity are, of course, delusions of suspicion,

infidelity, persecution and electricity. These cases are quite common in the institutions for the criminal insane and their offenses include assault, arson, homicide, and other vicious crimes. These are the cases which are classified as paranoid forms of alcoholic psychoses. Deterioration is slow and the duration often extends over many years.

It is not always easy to separate the paranoid forms of dementia præcox and alcoholism from other psychoses which are associated with persecutory trends of long standing but not characterized by any clear cut symptomatology and are, therefore, by elimination, classified as paranoid or paranoia-like conditions. These may be considered with genuine cases of paranoia as far as criminal acts are concerned. As a result of the mild and slowly advancing deterioration and the entire control by persecutory ideas they constitute an exceedingly undesirable class and are often guilty of crimes against the person. As they become acquainted with the processes of law and legal phraseology they frequently become active in instituting suits and obtaining writs of habeas corpus when confined.

A most dangerous group of offenders, as has been shown, is included in the category of the defective habitual criminals, who are often recidivists and, owing to lack of proper medical supervision, become incorrigible. These people are guilty of sexual offenses, rape, sodomy, etc., and include many petty thieves, vagrants, prostitutes and swindlers, and are exceedingly susceptible to alcohol and drugs. When under the influence of these stimulants they sometimes commit homicides. It is in the disposition of these cases that our greatest legal complications occur. When the question of responsibility arises, as it frequently does, the defense of insanity is interposed and the battle of medical experts ensues, not as a consequence of the incompetency of the medical profession, but as a direct result of the unsatisfactory provisions of a legal code which is too inflexible. Sexual and other crimes are, of course, common in the readily distinguishable grades of imbecility, but little opportunity for difference of opinion exists. How, then,

are these questions disposed of by the courts? The present Anglo-Saxon conception of criminal responsibility is worthy of consideration on account of its antiquity if for no other reason. In the trial of MacNaughton for murder in England in 1843 the defendant was acquitted on the ground of insanity. Chief Justice Tyndal's instructions to the jury were to the effect that they were to decide whether or not "at the time the act was committed" the defendant "had that competent use of his understanding as that he knew that he was doing by the very act itself a wicked and a wrong thing". As a result of the dissatisfaction subsequent to this acquittal the question of responsibility was submitted by the House of Lords to fifteen judges of the English Court. Their deliberations resulted in the opinion that to establish insanity it was necessary to show that the accused was suffering from a diseased mind and not conscious of right or wrong or that he was laboring under some delusion which made him regard the act as right.

With some modifications and additions this interpretation of the law still stands. The English statute of 1883, which is still in force, reads as follows:

"Where in any indictment or information any act or omission is charged against any person as an offense and it is given in evidence on the trial of such a person for that offense, that he was insane so as not to be responsible according to law for his actions at the time when the act was done or omission made; then if it appears to the jury before whom such person is tried, that he did the act or made the omission charged, but was insane as aforesaid at the time when he did or made the same, the jury shall return a special verdict to the effect that the accused was guilty of the act or omission charged against him but was insane at the time when he did the act or made the omission." . . . "When such special verdict is found the court shall order the accused to be kept in custody as a criminal lunatic, in such place and in such manner as the court shall direct till his majesty's pleasure shall be known, and it shall be lawful for his majesty, thereupon and from time to time, to give such orders for the safe custody of the said person during pleasure in such place and in such manner as to his majesty may seem fit."

The difficulty in the interpretation of this law hinges, of course, on the question as to whether the accused was insane "so as not to be responsible according to law for his

actions". The method of determining this competency has unfortunately not changed to any material extent since the days of MacNaughton.

The provisions of the statutes in this country may be illustrated by the following excerpts from the penal law of the State of New York.

Sec. 815. "A person is presumed to be responsible for his acts. The burden of proving that he is irresponsible is upon the accused person except as otherwise prescribed in this chapter."

Sec. 816. "A child under the age of seven years is not capable of committing a crime."

Sec. 817. "A child of the age of seven years, and under the age of twelve years, is presumed to be incapable of crime, but the presumption may be removed by proof that he had sufficient capacity to understand the act or neglect charged against him and to know its wrongfulness."

Sec. 1220. Intoxication. "No act committed by a person while in a state of voluntary intoxication shall be deemed less criminal by reason of his having been in such condition. But when the actual existence of any particular purpose, motive or intent is a necessary element to constitute a particular species or degree of crime, the jury may take into consideration the fact that the accused was intoxicated at the time, in determining the purpose, motive or intent with which he committed the act."

The defendant, though suffering from delirium tremens, is responsible if he can distinguish between right and wrong and acts with deliberation and premeditation. *People vs. Mills*, 98 N. Y., 176, (1885). That the defendant is the victim of an appetite for drink overcoming his will and amounting to a disease is immaterial to the question of premeditation. *Flanagan vs. People*, 86 N. Y., (1881).

Sec. 34 (Penal Law, N. Y.). "A morbid propensity to commit prohibited acts, existing in the mind of a person who is not shown to have been incapable of knowing the wrongfulness of such acts, forms no defense to a prosecution therefor."

The doctrine that a criminal act may be excused upon the motion of an irresistible impulse to commit it, when the offender has the ability to discover his legal and moral duty in respect to it, has no place in the law. *Flanagan vs. People*, 52 N. Y., 467, (1873); *People vs. Carpenter*, 102 N. Y., 238, (1886). An act otherwise criminal is

justifiable when acting in self-defense (Sec. 42) and is not punishable when performed under duress (Sec. 859). The terms lunatic and lunacy include every kind of unsoundness of mind except idiocy (Chapter 27, Consolidated Laws N. Y., Sec. 28). It will be noted that this definitely excludes moral insanity and the so-called degenerative insanity but could not be construed as including constitutional inferiority and imbecility.

Sec. 1120 (Penal Law). Incompetency of idiot or lunatic. "An act done by a person who is an idiot, imbecile, lunatic or insane is not a crime. A person can not be tried, sentenced to any punishment or punished for a crime while he is in a state of idiocy, imbecility, lunacy or insanity so as to be incapable of understanding the proceeding or making his defense. A person is not excused from criminal liability as an idiot, imbecile, lunatic or insane person except upon proof that, at the time of committing the alleged insane act, he was laboring under such a defect of reason as

- (1) not to know the nature and quality of the act he was doing; or
- (2) not to know that the act was wrong."

Numerous decisions of the courts have a material bearing on the defense of insanity. When once established it furnishes to the accused not only a protection against conviction for crime but a sufficient reason why he should not be tried or sentenced, or if tried and convicted, why the judgment of the court should not be executed. (People vs. McLlvaine, 125 N. Y., 596, 600, (1891)). Sanity is to be presumed and it is never incumbent upon the prosecution to give affirmative evidence in a particular case. (Walter vs. People, 32 N. Y., 147, (1865)). Partial or incipient insanity is not sufficient if there is still the ability to form a correct perception of the legal quality of the act and to know that it is wrong. (People vs. Taylor, 138 N. Y., 398, 407, (1893)). An insane delusion having no connection with a homicide does not relieve one from the responsibility therefor. (People vs. Ferraro, 161 N. Y., 365, (1900)). A weak or disordered mind is not excused from the consequences of crime. (People vs. Burgess, 153 N. Y., 561, 569, (1897)). The test of responsibility is the capacity of the defendant to distinguish between right and wrong at the time and with respect to the act complained of. (People

vs. Silverman, 181 N. Y., (1905)). A lay witness may describe the acts of a person whose sanity is under investigation and then state whether these acts impressed him at the time as rational or irrational. The witness may characterize the acts but not the person doing the acts. (People vs. Pekary, 185 N. Y., 470, 481, (1906)). Evidence that the defendant had an irritable temper, or was subject to fits of passion from slight causes, is incompetent, where it appears that the act was done with premeditation and deliberation. (Surdram vs. People, 88 N. Y., 196, (1882)). The reputation of insanity in the family is not competent to prove insanity in the defendant. (People vs. Kørner, 154 N. Y., 355, (1897)). Where the defendant has given evidence tending to show that at the time he committed the homicide he was insane, the prosecution must prove his sanity at that time beyond a reasonable doubt. (People vs. Egnor, 175 N. Y., 419, (1903)).

It is the intent of the law that the mere existence of slight mental irregularities shall not of itself indicate irresponsibility and that crime, though the product of mental alienation, is not excused by insanity unless the morbid process goes so far as to demonstrate beyond a doubt that the accused, as a result of his mental defect, is not a free agent. It is obvious that legal responsibility for crime is radically different from the conception of competency entertained by the medical profession. To the psychiatrist, if the criminal act is in any way the result of an abnormal mental condition, it constitutes a symptom definitely associated with the disease process. It will be readily apparent from even a cursory reference to the statutes that a man may be recognized as suffering from paranoia, general paresis or any other well defined psychosis and still be criminally liable for acts performed while admittedly insane. The establishment of insanity *ipso facto* does not constitute a valid defense. From a medical point of view the influence of heredity, the existence of inferiority, imbecility or insanity, the consequent defect of judgment, the emotional instability, the impairment of volition, the abstract ethical deterioration, the influence of delusional and particularly persecutory control,

the presence of hallucinatory trends, memory defects, ideas of reference, mental excitement of the effects of a pathological depression, in short the numerous manifestations and natural consequences of a disturbance of the normal mental equilibrium, are of themselves a sufficient explanation of criminal acts in the insane. It must be remembered, however, that this is not the legal view. The provisions of the code are absolute. The accused must be shown to be suffering from such a defect of reason as not to appreciate the nature or quality of his act or that the act was wrong to establish insanity which absolves from liability to punishment. There is no other legal standard. It is a well known fact that there are many insane persons legally committed to our civil hospitals and very properly detained who understand fully the nature and quality of their acts in the majority of instances and who are well qualified to discriminate between right and wrong. These persons have been judicially determined to be insane and are, in the eyes of the law, incompetent, yet they are deemed responsible for offenses which they may commit as a result of their insanity. These individuals may be guilty of prohibited acts on account of irresistible impulses common to various psychoses, as a consequence of the loss of control exercised by the normal person, because of judgment defects, which exist even where the insanity does not constitute a wide departure from the normal, because of delusional control, as a result of emotional instability, as a consequence of inherited instincts, combined with an inability to acquire correct ethical discrimination, and for numerous other reasons which so frequently influence the acts of the insane. Of these factors the law takes no cognizance. This divergence of opinion is undoubtedly due to the fact that psychiatry has made vast strides in the last few decades, while the law most properly moves only with that dignity which accompanies absolute security in avoiding any possibility of error.

The method of determining responsibility varies somewhat with circumstances. Section 658 of the Code of Criminal Procedure of the State of New York reads as follows :

"When a defendant pleads insanity, as prescribed in Section 336, the court in which the indictment is pending, instead of proceeding with the trial of the indictment, may appoint a commission of not more than three disinterested persons, to examine him and report to the court as to his sanity at the time of the commission of the crime."

It will be noted that the commission is to be composed of disinterested persons in the discretion of the court and may or may not include medical men. It will be observed, moreover, that the law reads "may appoint a commission". It is not mandatory. As a matter of fact, it is quite customary in trying important cases to dispense with the appointment of a commission and determine the question of sanity or insanity in the presence of the jury. When this procedure is followed both the defense and the prosecution exercise the privilege of introducing expert medical testimony. It is, of course, necessary for the witness to qualify as an expert to the satisfaction of the court, if his qualifications have not already been judicially passed upon and established. The medical witness may give an opinion as to the insanity of the accused based upon his own observations or examination, the evidence which has been introduced during the trial or in the form of an answer to a hypothetical question. It has been frequently urged that the experts should be appointed by the court, thus insuring a fair and impartial determination of the question at issue. This would undoubtedly be a decided advance over existing methods. It must be borne in mind, however, that the prisoner can not be denied his constitutional right to introduce any witnesses, either medical or lay, for the purpose of defense. The number of experts may, in conformity with an established custom, be limited by the court.

In the event of an examination by a commission the court may act in accordance with the provisions of Section 659 of the Code of Criminal Procedure.

"If the commission find the defendant insane, the trial or judgment must be suspended until he becomes sane; and the court, if it deem his discharge dangerous to the public peace or safety, must order that he be, in the meantime, committed by the sheriff to a state lunatic asylum; and that, upon his becoming sane, he be re-delivered by the superintendent of the asylum to the sheriff."

"If the defendant be received into the asylum, he must be detained there until he becomes sane," when he is returned to the proper custody for "trial, judgment or execution, as the case may be, or be legally discharged." Section 661.

"When the defense is insanity of the defendant the jury may be instructed, if they acquit him on that ground, to state the fact with their verdict. The court must thereupon, if the defendant be in custody, and they deem his discharge dangerous to the public peace or safety, order him to be committed to the state lunatic asylum, until he becomes sane." Section 454.

It will be seen that the defendant, if acquitted on the ground of insanity, is thereupon relieved absolutely of any responsibility for his crime, even though subsequent investigation and observation should show conclusively that he was not insane. This occasionally results in serious miscarriage of justice. When the defendant is found insane by a commission, has been committed to a State hospital and has, in due process of time, recovered, he is remanded to court as has been shown. Under these circumstances there is rarely any trial, the prisoner usually being discharged from custody, the assumption being that an insane man should not be punished for crime and requires no further detention on recovery. The procedure varies somewhat in the different States. The Massachusetts law contains some features which differ materially from the New York Code.

"If a person who is indicted for murder or manslaughter is acquitted by the jury by reason of insanity, the court shall order him to be committed to a state hospital for the insane during his natural life, and he may be discharged therefrom by the governor, with the advice and consent of the council, when he is satisfied after an investigation by the state board of insanity that such person may be discharged without danger to others." (Chap. 504, Sec. 104, p. 711, (1909)). Laws of Massachusetts.

The laws of Rhode Island, Nebraska, South Dakota and many other States are more or less similar to those of New York in the case of acquittals on the ground of insanity.

The Indiana law is an adaptation of the English code.

"After the passage of this act, if upon the trial of any male person accused of a felony the defense of insanity is interposed, whether upon a special plea or a general plea of not guilty, the court or jury trying

said cause shall make a finding both as to the sanity of said defendant at the time so claimed and as to whether he committed the act as charged. And if it shall be found in favor of said defendant on such plea of insanity, but against him as to the commission of the act as charged, he shall upon order of the court be committed to and confined in the Indiana Colony for the insane criminals in like manner and on such conditions and for such terms as is now provided for by law for the confinement of insane criminals in a state hospital for the insane." (Chap. 87, Sec. 16½, p. 207, (1909)). Laws of Indiana.

There is a widespread belief on the part of the public that many criminals escape justice on a plea of insanity where none exists. A committee of the American Medico-Psychological Association in a report on medical expert testimony in 1910 makes the following reference to this subject:

"The real injustice in this matter is that the insane defense is not by any means employed as often as it should be. In other words, much more harm results from lack of expert testimony than from its defects. There are far more instances of the commitment of insane persons to prison for want of preliminary examination and recognition of their mental condition than there are of the commitment of sane criminals to hospitals for the insane. Many so-called criminals are convicted and sent to prison only to be found insane and transferred to the asylum for criminal insane. Such persons are wholly out of place in prison where they are not only stigmatized as felons and deprived of the proper and humane care that is their due, but are made worse by prison discipline, while the difficulty of enforcing prison rules in their cases greatly interferes with proper administration. Dr. Allison has reported that 53 per cent of the 179 insane persons under his charge at the asylum for the criminal insane at Matteawan who had committed murder were received from prisons to which they had been sentenced for life. Their histories and the character and course of the disease showed that at least 40 per cent of such convicted cases were insane at the time the crime was committed. In many cases the fact of their insanity was not recognized at the time of their trial, but in others the plea was set up and failed. Wherever the matter has been made the subject of inquiry this has been the story in all large prisons and institutions in which the criminal insane are received, both in this and in foreign countries. The lowest estimate from authoritative sources, and a most conservative one, is that ten insane persons are made convicts to one malefactor who escapes punishment on the ground of insanity." *American Journal of Insanity*, July, 1910.

The unsatisfactory results of our present methods of determining criminal responsibility have been ascribed to the

medical expert and to the legal profession and have been the subject of discussion for years. That the operation of the present system is open to grave criticism is universally conceded. Opinions differ as to the nature of the defect and the remedies required. Former Justice Clearwater of the Supreme Court of New York has summarized the situation as follows:

"1. There are no satisfactory standards of expertness and thus the testimony of charlatans is invited.

2. The character of the evidence often given by so-called experts is partisan and unreliable.

3. Trials are prolonged and their expenses increased on account of the number of witnesses.

4. The contradictory testimony of experts of apparently equal standing, having the same opportunities for acquiring knowledge of the facts, has a confusing effect upon juries.

5. Unprincipled self-styled experts are sometimes unscrupulously hired to support causes by specious and untruthful testimony.

6. Some trial judges are prone to permit incompetent so-called experts to testify to opinions predicated upon widely unrelated facts and to express views which are but the speculative vagaries of ill formed minds.

7. The expert must depend for compensation solely upon the litigant for whom he testifies.

8. The litigant who has the longest purse can produce the longest array of experts.

9. The bench sometimes permits the bar to treat the accomplished and modest expert with contempt.

10. Some trial judges are disposed to convert important trials into spectacular dramas which not infrequently descend to comedy and degenerate into farce, with the result that the administration of justice is degraded."

It must be confessed that this is the expression of an opinion which represents almost entirely the view point of the legal mind and is not entirely without bias. That other considerations enter into this somewhat complicated and much debated question is shown by the following recommendations submitted by a committee of the American Institute of Criminal Law and Criminology in 1911:

"1. That the legal tests of insanity for determining criminal responsibility be abolished.

2. That insanity should be held to be a good defense, whenever it negatives the necessary criminal intent.

3. That the various medical associations shall establish and maintain a code of professional ethics to govern medical experts.

4. That the various bar associations shall establish and maintain a code of professional ethics to govern counsel in criminal trials, where the defense of insanity is raised.

5. That medical witnesses who give opinion evidence in criminal cases where the defense is insanity shall be chosen from a qualified group."

The committee also recommended legislation designed to remedy these defects.

The views entertained by the medical profession are illustrated by a set of resolutions submitted at a recent meeting of the American Medico-Psychological Association:

"1. The proved rarity of wrong acquittals on the ground of insanity is the strongest evidence that the abuse of the insanity plea in criminal cases has been unwarrantably exaggerated.

2. That the insanity plea is not by any means raised as often as it should be to prevent the frequent miscarriage of justice arising from the conviction and imprisonment of insane persons whose true mental condition has not been recognized.

3. That the abuses which have crept into the method of presenting medical expert testimony have been largely the result of established legal tests and procedures, although their correction does not require radical changes in the law.

4. That inaccessibility of the evidence on both sides of the case is the chief cause of defective medical testimony.

5. That, whenever possible, the medical witness should not testify unless he has had an opportunity to make both a mental and a physical examination of the person in whose behalf the plea of insanity is raised.

6. That we consider the hypothetical question as ordinarily presented to be unscientific, misleading and dangerous to medical repute and that the evidence on both sides should always be included in its presentation to medical witnesses.

7. That in all criminal cases absolutely equal rights should be accorded the medical witnesses for both prosecution and defense for the examination of the person alleged to be insane.

8. That in our judgment the judiciary should by legal enactment be allowed more latitude in enlightening the jury and enabling it to comprehend the nature and meaning of the medical testimony laid before it.

9. That we recommend as advisable the adoption whenever possible of the so-called Leeds method of preliminary consultation by medical witnesses on both sides of the case as to its status.

10. That we advocate a freer use of appointments of commissions by the court.

11. That a period of hospital observation of all persons committing crime, in whose defense the plea of insanity has been raised, is by far the best method yet devised for securing important and accurate opinions, silencing popular clamor, avoiding prolonged and sensational trials and saving expenses to the State; also that we advocate the enactment in every State of laws similar to those of Maine, New Hampshire, Vermont and Massachusetts, providing that such persons may be committed by the court to a State hospital for the insane, there to remain for such time as the court may direct, pending the determination of their insanity.

12. That it is the sense of the association that it is subversive of the dignity of the medical profession for any of its members to occupy the position of medical advisory counsel in open court and at the same time to act as expert witness in a medico-legal case.

13. That we regard the acceptance by a physician of a fee that is contingent upon the result of a medico-legal case as not in accordance with medical ethics and derogatory to the good repute of the profession, and advocate the regulation of the procedure by legislation.

14. That we are in favor of any legislation that will secure a definite standard of qualifications for medical men giving expert testimony."

The courts, the medical profession and the general public seem to be equally dissatisfied with the methods of determining criminal responsibility which are now in vogue. This feeling will continue as long as the sole test of competency is the power of the accused to discriminate between right and wrong and know that he was doing wrong when he committed the act with which he is charged. The difficulty arises from the very proper requirement that a criminal intent must be established to constitute an infringement of the law. It will be conceded that no man who is mentally irresponsible should be punished for crime, nor, on the other hand, should such an individual be acquitted and discharged to continue to menace the public peace and welfare. The existence of any form of insanity should at once absolve from liability to punishment. If the offense constitutes a felony, as it usually does when the defense of insanity is interposed, a commission should be appointed to determine whether or not the accused was insane at the time the crime was committed. The commission in such

cases should be composed of three medical men who have had actual experience in the care and study of the insane in an institution. If they report after a thorough examination that the defendant was insane, he should at once be committed to a State hospital for further observation. If the hospital authorities, after a sufficient investigation, report that he has recovered or is not insane, he should be remanded to court. If he was insane at the time of the crime, that fact can usually be satisfactorily determined by the results of hospital observation, which should corroborate the findings of the commission, if correct.

The function of the law is not alone to punish the guilty, but to serve the equally important purpose of protecting society. When crimes are committed, as they so often are, by persons who are mentally defective, a question which can also be decided by a medical commission, the individual responsible should be committed to an institution where the proper care can be given him. Experience has demonstrated that the defective classes are not adapted to either the prisons or hospitals for the insane. An intermediate institution suited for their special needs is strongly indicated. They should be held under an indeterminate sentence and in many instances confined for life. As a result of hereditary defects, arrested mental development, ignorance and vicious environment this class furnishes the prisons with our most dangerous criminals. They require separate care with an opportunity for a special education adapted to their mental capacity and an industrial training which will enable them to acquire a knowledge of some trade which will permit them to earn an honest living when they have demonstrated their efficiency and trustworthiness. The discipline to which they are subjected during their institution residence should be rigid but at the same time adjusted to the requirements of individuals who are not properly equipped mentally. Many of these persons, after a prolonged supervision and education, could be granted a parole under the proper surroundings until they have shown that they are capable of earning a livelihood and conducting themselves in accordance with the provisions of the law. Many could ulti-

mately be discharged and those not qualified to care for themselves should continue permanently as wards of the State.

The defective classes have for centuries been held to be criminally responsible and have filled our prisons with incorrigibles. They are incapable of profiting by such treatment, are intractable and receive no benefit from the prison form of discipline. After completing their term of imprisonment they are liberated after an indefinite association with criminals and provided with no means of earning an honest competence. It would seem that our vaunted civilization should place at our disposal for remedying this situation some means other than punishment for the possession of an intellectual endowment for which the individual is in no way responsible. The defective should be under medical and not prison supervision. The medical aspects of criminal responsibility can not be disregarded or eliminated if a satisfactory solution of the problem is to be hoped for. These reforms can not be accomplished in a day. The general public must be educated to the idea that this is a medical rather than a legal question. The ends of justice can be accomplished and the protection of the public assured by a disposition of the defective delinquent which will contemplate his restoration to a social and industrial competency rather than a mere punishment without any material advantage to the individual or society.

DEMENTIA PRÆCOX DETERIORATIONS WITHOUT TRENDS.

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This paper deals with a group of cases in which one finds that there has been a slowly developing and progressive shrinkage in the patient's energy and capacity for work, with loss of interest in the ordinary affairs of life and a pronounced dulling in the emotional sphere—a condition of more or less pronounced apathy being gradually established, without, however, the patient ever giving expression to any particular trend of ideas, suspicions or delusions, and without the appearance of hallucinations.

This form of deterioration, which corresponds in its essential features to the dementia præcox type, is probably much more common than it is generally recognized to be. Because of the absence of psychotic symptoms, only a small proportion of such cases ever reach hospitals for the insane. In clinics and dispensaries, however, one meets more cases of the character, especially in youthful individuals, who are brought for examination with the history that they have simply lost all interest and ambition and appear to be growing stupid.

Bleuler in his recent work on schizophrenia has called special attention to this type of deterioration and believes that it is a frequent form of dementia præcox, notwithstanding the fact that so few cases are admitted to the hospital. Individuals who deteriorate in this manner are undoubtedly to be found in large numbers among the dependent classes of the community: Chronic loafers, beggars, vagrants, poor house inmates and many individuals with reformatory and prison records belong to this class. In well-to-do families such cases are usually provided for at home, being looked upon simply as eccentric personalities, nervous wrecks, etc.

When chronic alcoholism develops in this form of

dementia præcox, as it very often does, one is then apt to overlook the fundamental disorder.

Before discussing further these deteriorations, abstracts of a few illustrative case histories will be given.

M. C., a young man of 20, admitted in May, 1910. During boyhood patient was shy, stubborn and unsocial. Because of his distant attitude and lack of affection he never seemed to find a place in the family circle. He did not seek companions or friends outside of the home. In the grammar school he was not particularly interested in his work, but he was always promoted, and finished at the age of 14. He then entered the high school, where, however, he made a complete failure and left during the second term.

A decided change had manifested itself in the patient during the last year in the grammar school, that is, in his fourteenth year. He became more seclusive than before, began to show mean and irritable traits, would slap his sisters, refused to do errands or help his mother about the house. In the high school he appeared to have lost all interest and ambition, and after he dropped out in his sixteenth year he remained at home idle and indifferent. He was sent to the George Junior Republic and later to the Rome State Custodial Asylum for the Feeble-Minded. He returned home unimproved and grew steadily more apathetic and peculiar in his behavior. Several positions were obtained for him, but he always gave them up within a few days. He did not worry in the least over his failures. He was self-conscious and clumsy in his movements. It annoyed him if anyone looked at him or paid him any special attention. He himself would not look at one directly, but turned his face aside when talking and seemed to be only "half awake." He acknowledged to his brother that he masturbated and admitted that he did this as often as twice a day. The one thing that seemed to interest him was quack medical literature which dealt with masturbation and sexual disorders. He carefully preserved all such pamphlets obtained on the streets, and he was also in the habit of collecting and stuffing in his pockets newspapers, sticks, stones and other trash.

He never expressed any animosity toward anyone, had no suspicions or delusions, and never appeared to be hallucinating.

He was finally examined for commitment six years after the beginning of his decline. The reasons given for his commitment were the mental deterioration, peculiar conduct, refusal to work and irritability toward members of the family.

The mental status made on admission did not bring out any trend of delusions or establish any hallucinations. Orientation, memory and general grasp were well preserved.

During the year and a half that the patient has been in the hospital he has never displayed the slightest interest in anything. He

can not be kept at the simplest kind of work. He sits alone in his room or stands about in an aimless, stupid manner, gazing vacantly, occasionally grinning. Masturbation has been frequently observed.

When interviewed one notices that his demeanor is peculiar. He has a sheepish expression, smiles in a mechanical fashion, frequently gives a suppressed laugh. The facial muscles twitch and occasionally the head is jerked a little to one side. There is no spontaneity in speech, his voice is low, attention poor, and sentences are often left unfinished; there is, however, no distortion in the stream of thought, no peculiar utterances are noted, and under the stimulus of questioning he yields considerable information. When his present condition is inquired into, he says that his head feels weak and dizzy and that his mind does not seem to work as it used to do. He attributes his symptoms to masturbation, thinks that it made him nervous and weak and brought about a failure in his mental power so that he could not learn anything more at school. Later, when he tried to work, he made a failure and was always criticized for being so slow. He seems to realize that a certain change came over him; acknowledges that he felt uneasy and embarrassed when he met people, as he believed that others knew about his habit because of his appearance.

He denies that he ever had any queer thoughts or imaginations, he has never heard any voices, never had any feeling that he was under influence or control. Physical examination negative.

Summary. We have an individual who in childhood was noticeably deficient in social and altruistic feelings; a seclusive personality without wholesome companionship in the family or outside of it; fairly well endowed intellectually but deficient in application and lacking in interest. In dealing with the sexual instincts of puberty he was apparently without sufficient healthy balancing interests; with excessive masturbation he lived more and more within himself and deteriorated into a state of grave apathy, showing also constrained behavior, mannerisms, silly smiling and diminished power of attention. No incoherence in the stream of thought. No delusions or hallucinations.

C. E., a man of 37, admitted August, 1911.

We have no satisfactory account of the patient's makeup prior to about the age of puberty. At school he usually stood number one in his classes.

At the age of 14 he began to grow quiet, seclusive and slow. He seemed to have no desire to take up any occupation; he had several positions, but he was so lazy and careless that he was soon discharged. He complained much of weakness and seemed to have lost all interest and energy. After the age of 19 he ceased to make any effort to work and settled down to a life of complete idleness. He would not go out of the house unless forced to do so. It was always difficult to get him out of bed in the morning. He neglected his person, would not comb

his hair, refused to bathe, was often filthy in his habits. He lost all affection for the other members of the family and when his father died he showed not the least emotion.

It was known that he was addicted to masturbation.

The patient never expressed any suspicions or delusions; never gave any indication that he was hallucinating. No episodes of any kind occurred other than irritable outbreaks when forced to do something he did not wish to do.

The patient was kept at home for twenty-three years after the deterioration began. The immediate cause of his commitment was the death of his father. The other members of the family then refused to support the patient. The certificate of commitment was based on a description of the patient's deterioration, his irritable outbursts and inclination to make assaults.

The mental status on admission did not reveal any delusions and no hallucinations were admitted. The patient said that there had been trouble at home because he did not get up in the morning or do any work. He did not think he had been at fault, and claimed he was idle because he had been unable to obtain any occupation. His excuse for remaining in the house all the time and wishing to stay in bed was that he felt weak.

During the five months since admission his condition has not varied. On the ward he is very seclusive. He never speaks unless questioned directly. He is a member of one of the work parties on the farm.

He has a dull, stolid facial expression; he is slow in speech but answers questions freely; there is no disturbance in the stream of thought. Repeated examinations do not reveal any indication of a trend. He appears to be without deep feeling of any kind. He shows no concern over his failures in the past. He will not admit that any particular change came over him during his youth or that he was inefficient. He feels no resentment because he was sent to the hospital and is well satisfied to remain here.

In regard to his sexual life, he admits that he began to masturbate at 14, which corresponds to the year during which the family noticed the beginning of his decline. He continued the habit, he claims, for three or four years. He does not now think that it affected him unfavorably. He feels that his mind is clear and does not believe that his memory has failed. Physical examination shows nothing of importance.

Summary. In this case we have apparently a simple deterioration in interests with loss of all ambition and a blunting of the emotions, the patient sinking into a secluded, idle existence without the appearance at any time of delusions or hallucinations. Although the duration is now about twenty-three years, the personality remains well preserved, the behavior quite natural, attention good, stream of thought coherent. The deterioration began at about the age of puberty and

was coincident with masturbation. The patient had previously acquired knowledge readily at school, but we have no further details regarding the early traits of character and disposition.

W. O., a young man of 22, admitted May, 1910.

In boyhood the patient was seclusive and stubborn; he never formed strong attachments, even towards his parents he was indifferent. He did poorly at school and the teachers reported that he was dull. As he had myopia it was thought that his eyes accounted for much of his difficulty. Because he began to play truant he was sent to a reform school, from 13 to 15. He then went to work. At first he did fairly well and kept a position for a year. Then he began to work irregularly, grew indifferent and finally refused to do anything. He seemed to have lost all interest and energy; he spent much time sitting in the house gazing in an abstracted manner. No delusions or hypochondriacal ideas were expressed at any time. He was committed at the age of 22 because he bought a pistol and talked of suicide.

In the hospital he showed no depression, but said that at home he had felt despondent and thought of ending his life. He attributed all of his trouble to masturbation. On the ward he was indolent and seclusive and unconcerned about his detention. He was very fond of lying on the bed during the day.

The patient talks freely when questioned, his attention is good and there is no disturbance in the stream of thought. He gives a fairly good account of the development of his trouble. He says that at school he was dull-minded and inattentive. At the age of 12 he began to masturbate. This was practiced excessively, often two or three times a day. Sexual thoughts and ruminations, even at this early age, seem to have occupied him considerably. He thinks that masturbation made him shy and gave him a downcast look. He felt that people could tell from his appearance that he was a masturbator. He thinks it affected his memory and made him feel stupid. He says that frequently he felt as if his thoughts were not well connected—"sometimes my mind would run straight for a time and then it would branch right off." He never had any feelings of influence or control. No suspicions or delusions. On one occasion for two days, about four years ago, he thought he heard his dead mother whispering to him saying, "Stop it! Stop it!" This referred to his masturbation. He realizes it was an imagination and has never had any other hallucinations.

At the present time the patient is exceedingly apathetic; has never asked to be released from the hospital; in fact he seems well content to remain, and admits that he is lacking in energy and ambition. He shows a rather constrained manner, seems ill at ease when spoken to, and explains that he does not like to look directly at a person. He also speaks of "waves of ambition" which come over him so that at times he feels better able to work than at others. Recently he has been willing to do some work on the farm.

Summary. The patient's makeup was plainly of the shut-in type. Stubbornness and absence of strong emotional attachments were also prominent traits. Backwardness at school, partially accounted for by myopia. Masturbation from the age of 12. Gradual deterioration in interests, loss of energy, finally an idle, apathetic state. No distortion in the stream of thought. Delusions absent; on one occasion he imagined that he heard his dead mother whisper that he should stop masturbating.

The following case will illustrate a not infrequent type of apathetic deterioration in which an hypochondriacal element enters.

B. M., a man 32 years old, admitted May, 1910.

At school the patient appeared to be dull and when he stopped at 14, he had reached only the second grammar grade. His failure to make satisfactory progress seems, however, to have been due largely, if not entirely, to indifference and lack of attention, as the intelligence tests now show that he can by no means be considered feeble-minded.

As a boy he was of a seclusive disposition, never cared for playmates, and a lack of affection for his parents was very noticeable. After leaving school he made a few half-hearted efforts to work, then remained at home idle. Various peculiarities in conduct appeared: He began to show silly laughter and developed the habit of repeatedly touching and adjusting articles that happened to be within reach. He would get a newspaper, spread it on the floor and then sit at some distance and gaze at it.

He always avoided girls. Masturbation began as early as the tenth year and the patient has never given up the habit. No suspicions, ideas of reference or persecution developed, and hallucinations appear to have been entirely absent.

About three years before admission he began to talk of being weak and sick; he visited numerous dispensaries and also consulted a private physician. He began to wet and soil his clothing with urine and feces. One morning he lay on the floor, began to yell and said he had lost the power in his legs. When a physician came in and told him to get up he did so, there being no actual weakness present. The patient was then committed, having been kept at home for eighteen years after the onset of the deterioration.

Here in the hospital, except for his hypochondriacal complaints, no trends have ever been elicited. His mood is one of indifference, he laughs in a foolish manner, and shows various peculiarities in speech and action. He claims to have bladder catarrh, talks of being in a serious condition, thinks he might develop convulsions or paralysis. The complete absence of any affect in connection with these ideas is striking. He wets himself with urine and says he can not control his

bladder; attributes this weakness to drinking beer and masturbation. He denies that there is any sexual gratification connected with his frequent micturition. Examination of the urine shows nothing to account for these symptoms.

His speech is not distinct, his voice falls before a sentence is finished and he ends up with a peculiar throat noise. He makes jerky movements of the legs by contracting the muscles of thighs and buttocks. He says these are nervous movements performed without thinking. Stream of thought shows no disturbance and no peculiar utterances are noted.

The patient has a good memory and has a fair fund of general knowledge, spells difficult words correctly and does calculations, including fractions, accurately.

Summary. A shut-in type of personality from boyhood. He was indifferent at school, lacked any strong family feeling, masturbated from the age of 10, and failed to develop any concrete interests. Deterioration characterized by mannerisms, silly laughter, emotional blunting and general apathy. Stream of thought remains coherent. About fifteen years after the deterioration began there appeared hypochondriacal ideas, which stand in relation to his abnormal sexual habits.

The following case I consider to be one of particular interest and in some respects it differs from the preceding cases. The deterioration in this patient appeared much later in life in an individual who, although of the shut-in type of makeup, possessed a good amount of energy and ambition, acquired a professional education and was apparently well established in the practice of medicine, when an insidious decline commenced and the patient gradually sank into a state of profound apathy.

L. M., admitted March, 1911, a physician, 44 years old. As a youth the patient was studious, bright and ambitious. He was always quieter and less sociable than were his brothers. The usual sports and pastimes of boys did not interest him. He was never known to have a sweetheart. He finished the grammar school at 14 and then entered the College of the City of New York, where he was graduated as B. A. when 20 years old. He then matriculated at the College of Physicians and Surgeons, and at the age of 23 received his medical degree. Soon after obtaining his medical license he opened an office on the lower east side of New York City. He seems to have had considerable success in practice, was a hard worker, and in a few years his annual income amounted to four or five thousand dollars.

The patient was always temperate in the use of alcohol and he had no drug habit. His brother never knew that he had any sexual rela-

tions. He did not appear to care anything about women, and even after he was established in practice he never talked of getting married. No masturbation was ever observed by the family even in his youth or later years.

The patient had few if any close friends, and even toward his family he was distant and uncommunicative regarding his personal affairs.

The family is not aware that he ever had any particularly unpleasant experience, serious disappointment or other cause for worry.

The deterioration began when the patient was about 32 years old. He had then been established in practice for nine years. Without any known cause, the patient's practice began to fall off and the following year he opened an office further uptown, the object being to get established in a better neighborhood. From this time on, however, there was a progressive decline in the patient's energy, he took less and less interest in his work, and became very seclusive and uncommunicative. He began to spend hours sitting in the house doing nothing, seemingly in deep thought. He changed the location of his office several times, but his practice continued to diminish, and finally when he was 40 years old, he closed his office and went to live with relatives, who thereafter had to support him. He then neglected everything, ceased to give proper attention to his personal appearance, did not keep his body clean, omitted to change his clothing and would not bathe. He was extremely secretive, avoided visitors and friends, never left the house unless it was necessary, and spent many hours daily lying on the bed.

He never developed any suspicions or expressed any delusions; gave no evidence of hallucinations. He was not depressed or hypochondriacal. He did not appear to worry over his failure. Finally the family decided to have him committed because he refused to take care of himself and showed symptoms of such marked deterioration.

On admission to the hospital patient was remarkably indifferent and accepted his detention without any manifestation of emotion. No morbid trend of ideas was elicited; he denied that he had ever experienced any hallucinations. He maintained that he had no trouble or worry of any kind. He admitted that for the past few years he had done no work and explained that he had lost his practice because some of his patients had moved from the neighborhood, and subsequently he had been unable to establish himself in a new office.

At the present time patient is profoundly apathetic. He never evinces the least interest in anything. He spends the entire day sitting quietly in a chair, absolutely idle, gazing vacantly, never moving unless it is necessary, never speaking spontaneously. He is unmindful of his personal appearance and fails to keep his clothing clean.

When interviewed patient is attentive; he answers questions will-

ingly, is relevant and coherent in speech, talks in a deliberate manner, does not show emotion in either his voice or facial expression. Except for his slowness and lethargy nothing peculiar is to be noted in his conduct. In reply to questions he claims to feel perfectly well, both mentally and physically. He has no complaints to make and says he has nothing to worry about. He denies that he is indifferent or that he is lacking in interest or ambition, and he frequently reiterates the following phrase: "I am ready and anxious to take up active practice." He gives trivial reasons for his present idleness. He says, for instance, in explanation for his inactivity, "I don't like to bother anybody." He thinks that in a place like this it is best to sit quietly and alone. As an excuse for his seclusiveness he says: "I am a doctor and accustomed to be alone. I never mingled much in society." As to his untidy personal appearance, he maintains that he dresses as neatly as he can under the circumstances.

No suspicions, ideas of reference or delusions of any kind can be elicited. He denies that he has ever had any hallucinations, and nothing has been observed in his conduct to suggest their presence. Although he claims that there was no cause for his being sent to the hospital, he feels no resentment against anyone, makes no protest, and has never made the slightest effort to gain his release. When surprise is expressed at his complacent attitude he simply remarks: "I try to make the best of conditions." As to the causes for his failure in practice, he says it was due to the fact that some of his patients moved away, but he attributes it mostly to the fact that he changed the location of his office and failed to get established in the new neighborhood. He will not admit that there was any diminution in his energy or interests to account for his failure. He was less active only because he had fewer patients. He does not show the least concern over the past and has no plans for the future.

In regard to his sexual life, patient denies that he ever masturbated or that he ever had any sexual intercourse. He claims that he was never attentive to any woman and never thought of getting married. When asked if his indifference in this direction was not unusual, he replied: "I was too busy with my practice."

There is no impairment in the patient's orientation or memory. He gives dates accurately, does calculations correctly, his writing shows no defect, spelling is good. There are no physical symptoms suggestive of an organic disorder. Lumbar puncture negative.

Summary. The patient from early youth presented many signs of a seclusive personality. He was, however, ambitious and energetic, and later his professional work served to bring about considerable contact with the external world. As to his inner mental life we know little, the patient claims there is nothing to reveal. He appeared always sexually indifferent and denies masturbation. A falling off of interest and energy began at about the age of 32; the shut-in tendency became markedly accentuated, the patient gradually severed all con-

nection with the outside world and settled into a secluded, apathetic existence without ever giving utterance to any trend of delusions. The personality remains well preserved, there is no oddity in behavior and no thought distortion.

These cases will suffice to show the main characteristics of this form of simple deterioration.

The outstanding features in this group of cases appear to be the following :

The appearance in childhood of signs of a shut-in type of personality. This is probably a very deeply rooted tendency and has much to do with later developments. In fact, what we call the deterioration in these cases is, to a great extent, nothing more than a "growing inward," a tendency to ignore the external world, a living apart without further interests in the affairs of life.

Standing in close relation to this shut-in disposition is the difficulty in sexual adaptation, the auto-erotic traits appearing early and masturbation becoming a fixed habit. The deterioration seems to begin in most cases at about the age of puberty when the difficulties in dealing with the sexual instinct are most acute. The decline may, however, begin much later as is illustrated by the case of the physician. We have been impressed by the observation that in these cases, even after many years' duration, the personality remains well preserved and in no case have we found incoherence in thought, peculiarities of language, neologisms, etc. The question arises, therefore, whether or not the absence of a trend has anything to do with the absence of distortion of thought.

These deteriorations without trends are of special interest in connection with the psychogenic theory of the development of dementia præcox. In cases of dementia præcox, by analysis of the delusions, hallucinations and peculiar behavior it becomes possible to trace the symptoms back to certain underlying complexes which appear to be factors of dynamic importance in the development of the mental disorder. These complexes account for most of the symptoms and always determine the main trends in the psychosis. It

is not claimed that complexes are essential causes of the disease, but they evidently belong to the etiological constellation in which makeup and mental habits also play an important rôle. That all symptoms of complex reaction may be absent is shown by the occurrence of these trendless deteriorations. The psychological analysis of cases of dementia præcox, leads us to look upon the psychosis as an attempt at a readjustment, the patient reaching out, as it were, to find some sort of satisfaction or compromise for the conflicts with which the personality has to deal; hence we find in the delusions and hallucinations wish fulfillments, compensations, defense reactions, etc. These deteriorations without trends, as suggested by Dr. Hoch, differ from the other forms of dementia præcox in that there is no evidence of any such effort at readjustment; the patients simply slide downward, lose interest, withdraw more and more from contact with the world, without making even a feeble attempt at adjustment.

Dr. Meyer in his dynamic interpretation of dementia præcox has emphasized the fundamental importance of the early manifestations of deficiencies in the instinctive life; faulty mental habits and certain tendencies of the personality which put the individual at a great disadvantage and made a smooth adaptation to the demands of life difficult if not impossible. In other words one finds in the original endowment lack of sound instincts in one or more directions, tendencies to develop unhealthy attitudes and habits, which if unchecked, lead quite naturally to disastrous results. These simple deteriorations, uncomplicated by any reaction to complexes, illustrate well this psycho-biological conception of dementia præcox.

The points which have interested me most in the study of these cases are the following:

* 1. We would like to know more about the extent of this form of deterioration in the community generally. Dementia præcox of this type may be much more prevalent than we are aware of because most of the cases are likely to remain outside of the hospital. The recognition and further investigation of these cases is of practical import-

ance, as many children who fail at school or who "break down" at about the age of puberty belong in this group, and among abnormal characters and the dependent classes generally, many cases of this kind of deterioration are probably to be found.

2. In the clinical analysis of these cases we find no indication of the mechanisms usually found in dementia præcox, and therefore, absence of all symptoms and trends which ordinarily come about in reaction to disturbing complexes. These cases serve to emphasize peculiarities of makeup and unhealthy attitudes and faulty habits as important factors in the deterioration. Above all there stands out the tendency to live a shut-in existence with inadequate sexual adaptation.

THE PROBLEM OF TOXIC-INFECTIONOUS PSYCHOSES.

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The demarcation of the symptomatology produced by toxic and infectious causes, is still a problem which presents considerable difficulty. Among the best contributions to this subject, contributions which really furnish some help, I would mention the work of Bonhoeffer on alcoholic psychoses,* and his more recent work on symptomatic psychoses,† as well as the work of Bleuler on dementia præcox,‡ in which the subject of toxic infectious disorders is often touched. In the following I desire to give a brief survey of the field, and to bring out certain points which may contribute a little towards a clearer formulation of this problem.

We must assume that, like every other functional mechanism, the mind can respond to influences which disorder its functions only by certain reactions, and probably these reactions are limited in number. So far as we can see at present, there are chiefly three types which we may call, (1) the organic reactions, (2) the affective reactions, and (3) what may be termed the trend reactions.

The organic reactions are characterized essentially by a diffuse defect of memory, retention, apprehension, or, to put it briefly, by a diffuse disorder of activization of memories. The affective reactions are characterized by disorders, also diffuse, which follow essentially the lines of the affective states of the normal; while the trend reactions are those in which Freudian mechanisms are uppermost, and in which the disorders are therefore often more topical than diffuse.

* Bonhoeffer. *Die acuten Geistesstörungen der Gewohnheitstrinker*. Jena, 1901.

† Bonhoeffer. *Die symptomatischen Psychosen im Gefolge von acuten Infektionen und inneren Erkrankungen*. Franz Deuticke, 1910.

‡ Bleuler. *Dementia Præcox oder Gruppe der Schizophrenien*. Franz Deuticke, 1911.

Bleuler, in his recent book, though he does not state the situation in the same way as we have done just now, is evidently guided by somewhat similar principles, for to him manic-depressive insanity is represented only by the purely affective mechanisms; in his huge group of dementia præcox are contained cases in which trend mechanisms play the important part, although with his conception of a primary disease process in dementia præcox, he includes also much more. But his excellent symptom-analysis, has shown, at any rate, that most of the active symptoms are explicable on the ground of such mechanisms. Finally, Bleuler has also shown, more clearly than anyone else and more in detail, how fundamentally different are the organic mechanisms from those of dementia præcox or manic-depressive insanity.

What we call mental *discases*, need not, of course, coincide with such reactions; when we speak of manic-depressive insanity, dementia præcox, hysteria, epileptic insanity, general paralysis, etc., we have to expect that various other factors enter into the formation of the resultant clinical picture, such as the makeup, the etiology, perhaps secondary phenomena, etc., and that we will find only in a limited number of cases, pure reactions. Interesting as it would be to deal with this question in a broad way, we have to pass to the subject in hand, namely, to the toxic infectious disorders, and ask ourselves which of these reactions may be called forth by toxic or infectious causes.

In order to appreciate the wide possibilities, we must call attention to the fact that we find, to take some special samples, Korsakoff's syndromes, pure manic-depressive pictures, but also conditions which resemble dementia præcox; in other words, typical organic reactions, affective reactions, and trend reactions.

Now, we do not call all such types toxic infectious psychoses, *c. g.*, a pure manic picture, even when produced by a toxic etiology, would usually not be thus diagnosticated. Nevertheless we can not doubt the influence of the toxic etiology. On the other hand, there are other psychoses which we do not hesitate, as a rule, to group as toxic infectious

psychoses. These are the Korsakoff syndromes, the deliria, and states which in some ways resemble the deliria (of these we shall speak more at length presently) but which also show marked differences from them, and which are sometimes termed amentia; and finally we have the hallucinoses. It is these conditions which we now have to deal with a little more at length.

What is delirium?

Kræpelin speaks of clouding of consciousness, incoherence, and hallucinations, and gives thus expression to the usual conception, or rather, description. As conditions in which deliria occur, he mentions toxic states, organic disorders, manic-depressive insanity, and hysteria. It is obvious that here clinical pictures and mechanisms are put together which probably differ fundamentally among each other. But we may pick out among these a fairly well characterized one, namely, that which is represented by the alcoholic, the fever, and the drug deliria, the latter term being used in the sense in which I used it some years ago in describing delirious states produced by various combinations of drugs. According to Bonhoeffer, the essential alterations in these deliria are a weakness of the train of thought, which gets lost in side association, this leading to defective combination of the data of the environment; to this are added retention and attention disorders. Bleuler describes similarly the primary defect, in conditions of this sort, as one in the faculty to combine sense impressions, associated with non-perception of many sense impressions and their falsifications, in the direction of illusions. These are of course essentially descriptions.

It seems to me that the close relationship, which especially the alcoholic deliria bear to the Korsakoff psychosis, and its analogy or resemblance to the Korsakoff psychosis, points the way to a somewhat better understanding of these deliria. It seems that, as in the case in organic reactions, here too the understanding of the environment, that is to say, the orientation, and the train of thought are disordered, because apprehension and train of thought require ready activization of many associations. For the train of thought

this is clear enough, for the apprehension or orientation, it needs some explanation. When I see an object, or find myself in a certain situation, all that is associated in my mind with the data thus perceived must in some way be aroused (to be sure not necessarily consciously) before an understanding of the object or the situation can take place. In profound cerebral atrophy of general paralysis, or senile or arterio-sclerotic dementia, in which there is a fading of many memories, we find that the concepts, the train of thought and the understanding of the environment, suffer gravely, because, as we have said, the extensive arousing of associations no longer takes place. I take it that *mutatis mutandis* a similar condition occurs in Korsakoff psychosis. Now, in the deliria of the type just described, it would seem that we are dealing with something of the same sort, but the disorder here is acute and recoverable, and in harmony with its transient nature it is represented more by a weakness than an actual loss, so that by attracting the patient's attention, an improvement in the mental activity can be brought about, while if left to himself the patient's train of thought becomes more fragmentary and his apprehension more faulty. This leads to the variations in the level of consciousness, as we might call it, which are so characteristic of these deliria. With this conception, therefore, we regard this type of delirium, or, at any rate, the most important part of its mechanism, as closely related to the organic reactions, very much as we would certain forms of stupor, which, however, for the sake of brevity, I shall here leave out of consideration.

These deliria, to describe them once more, are then characterized by complete disorientation, by variations in the level on consciousness, by incoherence, by a speech defect which resembles, but is much more marked than, that of fatigue and shows itself by slurring, as well as by verbal and more particularly literal paraphasia, the speech and incoherence varying with the level of consciousness. If we add to this, the diffuse retention defect which Bonhoeffer claims to exist in such conditions, we have all the more

reason to approach them to the organic reactions and to speak of them as *organic deliria*.

But we also speak of other conditions as psychogenic deliria, and it will be necessary to characterize these. They evidently represent quite a different type of reaction. Bleuler has formulated the mechanisms of these states very clearly, and, as I believe, correctly. According to him, they occur, notably, in hysteria and dementia præcox. In them we find, in the center of the reaction, so to speak, a realization of a wish, more or less symbolic, of course, with a more or less complete splitting off of the rest of the personality, or more or less complete exclusion of the outside world, or falsification of the reality in harmony with the main trend.

Hallucinations and delusions are of course present in both the organic and psychogenic deliria, and therefore, superficially, the resemblance may be considerable. It would lead me too far to speak of the clinical differentiation, but I do not think that there can be much doubt as to the essential difference in the mechanisms of the two.

We have seen that the organic delirium occurs in alcohol and in certain drug conditions. Probably it also occurs in uremia, but according to Bonhoeffer it seems that in the infectious diseases it occurs only during the febrile period, that is, during the height of the disease, whereas during the period of defervescence these organic deliria are rarely seen. But what is found then, and what makes up the largest contingent of the toxic infectious psychoses, which we find in the ordinary psychiatric hospital, are, what we might call, for want of a better term, amentias. I am quite well aware of the fact that this is a much abused term, but I do not see why it should not serve to characterize these cases which, while bearing certain resemblance to the organic deliria, are yet in many ways different from them and the clinical picture is less simple. To judge from what I can gather from Bonhoeffer's book, and from my own clinical experience, I would say that these conditions differ clinically from the organic deliria in the following ways: In the first place, the patients are often less accessible, more difficult to examine, the orientation or disorientation harder to determine,

but evidently it is not infrequently less disordered than in the typical organic deliria. The variations in the level of consciousness do not occur; the speech defect is not pronounced, or, as a rule, entirely absent; the incoherence is more permanent and, if anything, more marked; the content of the psychosis is apt to be less simple than in the alcoholic deliria, for example: manic features often occur, in the sense of flight of ideas with many sound associations and distractibility; the mood varies, but I am not certain that anything very definite can be said about differences there. Bonhoeffer states that the acts of such cases are not simply in harmony with the hallucinations of the moment, but are much more like those of catatonic patients. Negativism, stereotypies, verbigeration, etc., are prominent, so much so that no active symptom which occurs in dementia præcox can not be seen here also, and as a matter of fact, the differential diagnosis may be very difficult, or only possible on the ground of etiology and onset or outcome, and it is for this reason that Bleuler unhesitatingly puts many of these cases with his group of schizophrenia. But the cases usually get well, and get well in a comparatively short time. Therefore, we have a picture which differs from the organic delirium and contains many features which we know to exist in purely endogenous disorders, in which a toxic etiology similar to that in the more typical toxic states, is a pure assumption. Nevertheless the disorientation and the, sometimes very marked, incoherence, raise the question whether these traits are not identical with those of the organic deliria, that is to say, whether they are not in the same sense, organic features. This is a question which we can not settle, but it seems to me that the problem is thus stated; at any rate these *amentias* form plainly a much more evident transition to the purely endogenous forms than do the organic deliria.

We have not spoken of the hallucinations, which are evidently a very important feature in the toxic infectious psychoses. In alcoholic deliria the hallucinations are characterized by their simplicity. They seem to refer essentially to the habitual trains of thought, much as in the case of Korsakoff psychosis, or as Bonhoeffer has shown in the case

of illusions, they often refer to ideas superficially associated with the objects which are falsified in an illusory manner. Other hallucinations are evidently caused by the distortion of entoptic phenomena. Visual and touch hallucinations are much more common than auditory. It has frequently been pointed out that hallucinations of the lower senses, especially bodily hallucinations, do not belong, at any rate, to the picture of the alcoholic delirium, and Bleuler has insisted that in the alcoholic delirium, Freudian mechanisms are absent. It is very interesting that in the fever delirium, which, in its main structure as we have seen, is also essentially an organic delirium, we find, so far as the hallucinations and the content of the psychosis are concerned, a different situation. Bonhoeffer, who, on the whole, does not pay much attention to the content, nevertheless speaks of the fact that the content of the fever deliria refers much less to what we above have called the habitual, than is the case of alcoholic deliria, and Bleuler mentions the existence of Freudian mechanisms as prominent in these fever deliria.

I personally have had too little experience with fever deliria to have an opinion. Recently I had occasion to observe an excellent example of a typical organic delirium, in which the content of the psychosis evidently referred to very important matters in the patient's sexual life. We may say, therefore, that in the organic deliria, there are often no psychogenic features (the alcoholic deliria, as a rule), again they are quite marked (the fever deliria). In the cases which we have above referred to as amentias, Freudian mechanisms undoubtedly play a very important rôle.

The *hallucinosi*s has often been regarded as essentially of the same nature as the delirium. Kræpelin, for example, speaks of the possibility of a less intense process; Bonhoeffer, of a different localization. But we know so little of the relation of hallucinosi with anatomical changes, or with localization, that it would seem wiser to consider the clinical facts alone. Here we find that the cases who have hallucinosis, show a tendency, when they break down again, to again have hallucinosis rather than

deliria. The hallucinosis comes on after less prolonged drinking, sometimes after only a spree, whereas the delirium occurs in chronic drinkers. Chronic psychoses, hallucinatory or paranoid, develop more after hallucinoses than after deliria, though the hallucinosis is then apt to be less simple. But upon what these differences depend, we do not know. Cocaine leads more to hallucinoses than to deliria; some poisons produce in the clinical picture of a single intoxication hallucinations; on the other hand, infectious causes rarely produce pure hallucinoses. From this it appears at once that the hallucinosis *does* seem to have a position somewhat independent of the organic deliria. Moreover, we find that a hallucinosis may occur without any toxic etiology, so far as we can tell, and a patient recently observed at the Institute very well illustrated the fact that in the same patient it may be produced now by alcohol, now by mental causes, now by exhausting influences. We can, therefore, not deny the fact that the hallucinosis also seems to be more closely related to the endogenous disorders than to the organic reactions.

We may therefore say:

(1) That among the psychoses produced by a toxic infectious etiology, we have in the first place the typical organic reaction in the form of the Korsakoff syndrome, but also conditions which bear a relation to these organic reactions and which we have therefore called organic deliria. These occur in chronic alcoholism, as a result of large quantities of various drugs, and in infectious diseases at the height of the disease, *i. e.*, during the fever. It never occurs without a toxic or other organic etiology. Endogenous features are often not associated with it, but may be, without however altering the main features of the clinical picture.

(2) There exist evidently mixtures of this with the states which are to follow.

(3) In the stage of defervescence of infectious conditions, or in less severe toxic infectious states, a somewhat different clinical picture is observed, in which the exogenous and endogenous features are much more difficult to separate, a

picture however, in which the disorientation and the marked incoherence may be of similar origin as the same symptoms in the organic deliria, but at the same time we must not forget that similar symptoms may occur in purely psychogenic states. We must also remember that the picture, similar to the one we are now speaking of, may arise upon a non-toxic etiology. These conditions are remarkably mixed with manic features and with symptoms often seen in dementia præcox. They represent, therefore, more than the organic deliria, transitions to the more endogenous forms of psychoses.

(4) The hallucinosis, which is very often seen on the basis of a toxic etiology, and which Bleuler's consistency has forced him to regard as in all probability belonging to schizophrenia, is more closely related to the endogenous than the organic reactions.

(5) Most of the attacks produced by toxic infectious causes are short in duration. This is most striking in the manic and the dementia præcox-like reactions arising on such a basis.

(6) The toxic infectious etiology seems, more than any other soil, to lead to a mixture of reactions.

CASES ALLIED TO MANIC-DEPRESSIVE INSANITY.*

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The very existence of the allied groups in the psychiatric nomenclature of the State hospitals, must be regarded as a confession of uncertainty and infirmity, unless we prefer more euphemistically to interpret it as an evidence of probity in acknowledging our limitations. In other words, we admit that while we can not definitely identify a disorder, we appreciate its relation to a more definite group, for as Doctor Adolf Meyer has pointed out, "before we can ally one thing to another we must first know what that thing really is." (1) Therefore in allying cases to manic-depressive insanity, which we accept in the Kræpelinian sense, we have as a nucleus a disorder which is far more circumscribed and integral than the controverted dementia præcox and we would expect to find it containing a group of cases bearing a reasonable similarity among themselves.

This investigation of the cases diagnosed as allied to manic-depressive insanity, admitted to the male service of the Manhattan State Hospital from May, 1908, to January, 1910, was undertaken with the object of tracing the terminations of such cases as well as to establish their points of contact with other psychoses. In regard to this last point, it appears that if we represent the manic-depressive group by a circle, the allied cases would appear as tangents touching the circle at this or that point and then continuing their course in various directions. Although the number of cases studied is limited, because it was considered wiser to exclude those admitted less than two years ago on the ground that their outcome must still be regarded as uncertain, it is sufficient to reveal the principal reasons for keeping these cases apart from the pure manic-depressive group as is shown in the following table. It should be needless to add that, though no summary of the individual cases will be

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presented—for such summaries are not only tedious, but, as a rule, also unsatisfactory to the hearer—each case has been thoroughly abstracted in the study.

Cases not recovered : 15.

Died	4
From intercurrent disease or exhaustion produced by excitement.....	3
After two years in the hospital, from tuberculosis of long standing, but with patient depressed and continuously retarded throughout this time.....	1
In Hospital.....	8
Showing a rather typical dementia præcox deterioration	2
Working steadily with slight diminution in ambition	3
Termination still in doubt.....	1
In chronic irritable excited state.....	1
Circular form, once discharged but readmitted...	1
Transferred to other hospitals and considered chronic upon transfer.....	3

Cases recovered : 23.

Alcohol a complicating factor.....	7
Kept apart for minor considerations such as paranoid ideas, mixed symptoms, simple depression or hypomanic state.....	10
Allied for other factors.....	6
Psychopathic personality with irritability.....	1
Sudden mutism following prolonged attacks of rheumatism.....	1
Complicated by a severe cardiac lesion.....	1
Transient, ill-defined episodes.....	2
Deported, not well studied.....	1

From the study of these cases, I desire to focus attention on the following points: (1) The end results in cases which did not recover. (2) The apparent absence of sexual factors in those which recovered. (3) The presence of alcoholic and paranoid complications. (4) The frailties of the group as such.

Cases Still in the Hospital. With preconceived notions based upon casual impressions from staff meeting, I was inclined to believe that the allied group was swollen by a large number of atypical dementia præcox cases, which did not recover and consequently still remained in the hospital. To the contrary, however, I found of 38 allied to manic-depressive cases only 7 had stayed in the hospital practically without interruption and that of these only two show a deterioration characteristic of dementia præcox. A third patient, who exhibits at present a somewhat dilapidated appearance which on first sight gives the impression of dementia præcox, nevertheless shows a certain amount of alacrity and alertness, which makes the result still somewhat in doubt, notwithstanding the fact that he has shown comparatively little improvement until lately, after having been in the hospital for nearly three years. This case, began abruptly with a mute resistive and slightly catatonic state, in a person who is described as having previously been sociable, good humored and well liked, so that if he fails to improve to a greater extent, it will be a rather disconcerting exception to the conception of the type of personality and mode of onset usual in cases of dementia præcox.

The other three cases, who have been in the hospital since admission, are at present all active, oriented, interested and in touch with their environment. One of them, who gives a retrospective account of depression and confusion during the period of his active psychosis, when "his mind moved too fast," has reached a normal condition, with perhaps slight impairment of ambition. The second explains that he was in an excited condition on admission, during which he conceived queer religious ideas, which vanished after about two months. He, too, though actively working, retains a slight defect in initiative.

The third patient, an elderly man, whose hallucinatory excitement on admission was preceded by excessive indulgence in alcohol and tobacco, has good insight into the imaginary character of the hallucinations, and the pathological nature of his temporary elation, though he still

maintains, without any great persistence, that one of the former female attendants claimed that she was married to him.

On the whole this speaks rather well for the ability to separate the recoverable cases in functional disorders from those which progress to chronicity, on the symptomatic basis of Kræpelin, though we have come to be guided in diagnosing dementia præcox by three points, which Kræpelin does not emphasize, but which we have found of paramount value, namely, the gradual character of the onset, the seclusive personality of the patient and the failure of adjustment in the patient's sexual life. These additional criteria have so diminished the chance for error that the percentage of recoveries of cases which are either diagnosed pure dementia præcox or allied to it, is very small indeed. I might add that every single one of the recovered cases began acutely—or in a few cases subacutely—but of those, who remain in the hospital in a deteriorated state, there is a history of absolutely abrupt onset only in the one case mentioned above.

Sexual Factors. The absence of sexual difficulties, which play such an important rôle in the psychological processes of the dementia præcox cases, indicates that at least superficially they are of little importance in the manic-depressive disorders. While not infrequently a disappointment in love has been recorded as the upsetting factor, there was not the usual preliminary grovelling and ruminating over sexual mysteries that one finds in dementia præcox cases. The superficiality of this apparent difference has however recently been emphasized through the investigations in this direction of the psychology of manic-depressive cases by Maeder and Ernest Jones (²) as well as through more fragmentary analyses of the thought content during the psychosis itself made in the State hospital service, which indicate that many of the ideas are based upon and the actions are symbolic of previous sexual experiences.

Digressing for a moment, I would call attention to an interesting type of reaction, which we have had occasion to observe now and then in youths of 18 or 20, who developed

a typical insufficiency complex with feelings of inadequacy, hopelessness and intense depression, which they frankly attributed to worry over masturbation. While such cases are apt to be confused with dementia præcox on account of the age and often the inaccessibility of the patient, they eventually emerge from their depression to return to their former state of mental health.

Cases Which Have Recovered. Alcoholic manic conditions: The most frequent reason for allying a case to the manic-depressive group was not due to its resemblance to dementia præcox, but because of a complicating paranoid trend, exhaustive condition, or alcoholic factor, more especially the latter. The relation of excessive alcoholism to this group offers a problem quite as perplexing as the connection of alcoholic paranoid conditions to dementia præcox paranoides. It is often seen that an alcoholic debauch or hallucinosis alternates with a depression, or on the other hand may be the result of unnatural exuberance or dejection. It is a matter of common knowledge that the most ordinary incentive for indulgence in stimulants is, if not "to drive dull care away", at least to produce a spirit of well-being and inhibition of attention. Recognizing this influence of alcohol Münsterberg in this connection at one time urged that the universal temperate indulgence in alcohol in America would be desirable on the ground that it was less harmful than the inevitable substitute, which the American with his strenuous temperament would seek. ⁽³⁾ While there are two sides to this proposition, some of the substitutes for overcoming and avoiding difficulties are doubtless quite as deleterious as alcohol, as Ferenzci hints, when he quotes statistics, showing a startling increase in neurosis and other nervous disorders in the German army, which followed a fairly successful movement for the abolition of drinking ⁽⁴⁾.

Let us return, however, to the relation of alcohol to the manic-depressive group. From a psychiatric standpoint it appears that the addition of alcohol, a toxic agent, may obscure the primary psychosis, for a patient who experiences the hopelessness which manifests itself at the

incipiency of a depression, may seek to alleviate it by the universal panacea and develop an hallucinosis, which being after all, the most conspicuous symptom is mistaken as being the essential one. Again, if the abandon which accompanies manic states leads to alcoholic excess, it is quite possible that an hallucinosis may be superimposed upon an excitement. On the other hand I have come across no records of cases in which the converse, namely, a manic excitement produced by a debauch, has been demonstrated, nor do I know of any cases which would indicate that a distinct manic or a depressive attack may occur as a substitutive reaction, like a neuroses, through abstinence in a person habitually accustomed to stimulants.

The distinction that in true alcoholic hallucinosis the exaltation, flight of ideas and agitation diminish when the hallucinations begin to wane, whereas in true manias these symptoms are independent of any hallucinations which may co-exist, seems unsatisfactory. The only valid discrimination must be based on an investigation as to whether the emotional disturbances antedated the alcoholic indulgences and the determination of the alternation of sprees with depressions or excitements, when all possible influence of alcohol could be entirely eliminated.

Of the manic type of case I would mention J. B., a man now 52, who at the age of 41, after losing his position drank excessively, bought unnecessary furniture lavishly and could not be controlled at home. He was finally sent to Italy where he recovered, but, in May, 1907, six years later, after excessive drinking, he became violent and excited in reaction to auditory hallucinations, which consisted of angels singing and Christ talking. After an illness of four months during which he was in the Manhattan State Hospital, he recovered with insight, attributing his attack to alcoholic excesses, and he was discharged on September 9, 1907, as a case of acute alcoholic hallucinosis. After an interval of only three months during which he drank sparingly, he became worried over lack of work, said he heard strange voices and saw visions of elephants and phantoms, especially at night. He reacted to his hallucinations with

marked fear, claiming that he would be killed. When admitted to the hospital, however, he seemed depressed, sat with bowed head and replied slowly and inaudibly. On account of a varicose ulcer he was retained in the hospital for some time after the depression had lifted, and during convalescence from his physical malady, he developed a period of elation, volubility and mild motor unrest. When he was discharged, the diagnosis was made allied to manic-depressive insanity. Recently he has been readmitted in a purely manic state, with an assurance from his wife that he appeared entirely normal for nearly two years, until November, 1911, when he became excited and grandiose. Alcohol is not even mentioned as an etiological factor.

While from the recurrent attacks it now seems quite evident that this disorder is a manic-depressive reaction, the auditory hallucinations, fantastic visual hallucinations, more marked at night, and the fear reaction in the earlier attacks, certainly confused the picture to such an extent that it was unrecognized.

Another case, J. McG., a Bellevue Hospital rounder, former morgue employee, and apparently a chronic alcoholic, has been admitted three times within the past two years, with a different clinical picture on each occasion. The first time he was considered as *not insane*; the second, on account of a few date discrepancies and silly, somewhat simple jocular behavior he was classed as a chronic alcoholic, with mild mental deterioration, and finally he was readmitted, showing a manic excitement, with all the essential features which lasted several months, but from which he has finally emerged, so that now he is working daily as a fireman in the hospital. The last attack occurred without any apparent change in the etiological influences.

Of the depressed types, I would quote briefly the case of T. M., now age 47, of defective heredity, who states that he has been subject to periods of depression throughout his life, when he would wish to be isolated, suffered from a lapse of interest in his activity and at such times would resort to alcohol as a solace. Thus in 1893 while in Omaha

he suffered from a disorder which was either an hallucinosis or a delirium tremens. After a period of abstinence during which he was fairly contented for some years he again began to drink, finally developing delirium tremens in 1903 for which he was treated in a sanatorium and which was followed by an alcoholic hallucinosis in Manhattan State Hospital in 1904. On his next admission to the Manhattan State Hospital in 1908, however, on account of the feelings of insufficiency, history of depression and general retardation which closer questioning established had antedated the drinking, the diagnosis of allied to manic-depressive insanity was suggested.

Following this discharge he worked fairly successfully, quite free from alcoholic excesses. After he had accumulated a small sum of money as a result of his thrift and economy while working as a factory hand in Connecticut, he decided to move to Rochester, N. Y., to obtain a position in the kodak factory. Apparently the conditions there were not quite as they had been represented to be for he soon became discontented and after disagreement with his foreman, he went precipitately from the factory door into a saloon across the street, where he began drinking. After further indulgence he embarked on a typical alcoholic fugue, attended by the customary confusion and partial amnesia which landed him in New York City. Still in a depressed state, he voluntarily applied for admission to Manhattan State Hospital, where he quickly returned to his normal state.

In fact apparently in a goodly percentage of cases, not only of neuroses, but also of depressions and excitements which have been placed into the allied to manic-depressive group, the alcoholism is the result and not the cause, which in reality it tends to conceal, and at times the elementary cause of the depression is not entirely clear to the patient's own consciousness. H. W. Frink, who recently presented before the New York Psycho-analytic Society the analysis of a case of periodic alcoholism, demonstrated quite convincingly that the depression which preceded the patient's sprees was dependent upon an unconscious desire on his

part to revert to repressed sexual desires of an infantile character which were allowed free sway when the stupefying influence of the alcohol abolished conscious ethical censorship.

It is furthermore interesting to mention in this connection that the very recent investigations of the psycho-analytic school seem to emphasize that the trend of certain paranoidias commonly regarded as alcoholic paranoidias is due primarily to a reversion to a homosexual component which originated and became firmly fixed in infancy, but which had been repressed. When the patient through accidental causes or disappointments returns to the homosexual plane, he finds the former desires quite intolerable to his conscious ethical sense and therefore projects them upon some one else, *i. e.*, upon his wife whom he accuses of infidelity.⁽⁴⁾

Paranoid Ideas Complicating Manic-depressive Insanity. Another frequent reason for allying cases to the manic-depressive group is found in the presence of paranoid ideas which in both depressions and excitements may color the entire train of thought so that the altered mood of the patient may not be noticed. In fact, there seems to be what is called the "manic constitution," a fairly concrete type of individual, of great vital force, inquisitive, somewhat vindictive and querulent, who is apt to show a moderately well-defined paranoid inclination throughout his life.

Of course the fundamental symptoms of manic-depressive disorders are, according to Kræpelin,⁽⁵⁾ dependent on a psychic paralysis which manifests itself, (1) in diminution in attention, (2) retardation in the association of ideas and (3) superficial perception and pathological indifference. This psychic paralysis might be conceived as a restraining influence which obliterates censorship and allows the flood-gate of impulse and latent pent-up feelings to flow freely so that if the thoughts behind the barrier be murky or clear, tinged with yellow or red, the thought content in the psychosis is apt to be of a similar hue. Thus a well-concealed paranoid trend or a long-treasured secret grudge may crop forth persistently, more especially in depressions, and in the hypomanic states, ideas of persecution may be so

logically and energetically presented that they may be mistaken for the paramount abnormality though they are readily controlled when the patient reaches his normal state. One of the patients, whom I considered a chronic paranoiac, notwithstanding the fact that he had been in hospitals for the insane many times and released as recovered, because of his interminable account of the altercations and injustice done him by his family and neighbors, cleared after a few months leaving no doubt that the entire story had been delivered under the stress of superficial mental hyper-activity. He is now steadily engaged at his trade and living harmoniously with his family.

In this connection it is interesting to record that even in manics the identical trend reappears in recurrent attacks, as was shown in one of the cases recently readmitted whose flight of ideas appears in almost verbatim duplicate of that recorded five years previously.

Referring briefly to the exhaustive features I might mention that fatigue has been demonstrated through animal experimentation to predispose to infectious disease, and on the other hand, fatigue is one of the most salient symptoms of infectious disease. A parallel condition appears to exist in certain of the cases allied to manic-depressive psychosis, where overwork and sickness induce physical exhaustion which in turn precipitates depressions. Thus constitutional affections and even a local malady may produce a depression varying from a typical retardation depression only therein that the irritability, querulousness, and anxiety are exaggerated. The presence of rather severe depressions in chronic systemic intoxications, such as diabetes, nephritis and occasionally tuberculosis, suggests that some of the so-called functional depressions may some day be demonstrated as being due to some injury, possibly of a chemical nature, to the cerebral cortex.

I can not refrain from mentioning one class of cases in which the difficulties of diagnosis have been practically eliminated through the Wassermann reaction—that is depressions or excitements in persons of middle age who have previously been infected with syphilis. In such in-

stances the irritable hypochondriasis which often ushers in paresis closely resembles neurasthenic depressions or the initial excitement may be so closely akin to a manic attack that without decisive blood and fluid reactions, mistakes would be, and formerly undoubtedly were, made in both directions. (6, 7) The differential points upon which various psychiatrists insisted before the introduction of the serological and cytological tests have become superfluous. Such a case is one of an educated and formerly successful business man who contracted syphilis twelve years ago and who has been in a state of uninterrupted depression for over three years, but who can be at present definitely excluded from the general paralytic group.

Weaknesses of the Allied Groups. The question inevitably presents itself, just as it did during a recent investigation made of the allied to dementia præcox group, of the necessity or desirability of such a classification. One of the most striking facts is that a very large proportion of the allied to manic-depressive cases recovered, and a correspondingly small number of those grouped as allied to dementia præcox were discharged, so it is probable that in many instances the nature of the psychosis might have been determined by more careful attention to symptoms or greater accuracy in establishing facts. Inasmuch as this grouping of some cases has been made on the ground that from the meager information at hand, the nearest approach to a diagnosis would be one of the allied groups, we naturally find some histories which are worthless psychiatrically.

The presence of so many incomplete cases, both in the allied and unclassified groups emphasize the necessity for an incomplete group for cases where the facts and circumstances are inaccurate and wanting. This need is exemplified in the study which Dr. Kuhlmann⁸ undertook of the unclassified cases at the Buffalo State Hospital, in which out of 38 admissions so diagnosed, she was able on re-examination, after a more prolonged residence in the hospital, to satisfactorily group 22, and of the 16 which she was unable to classify, the difficulty in eight was unsatis-

factory data. Similarly, I find that in the allied to manic-depressive group, many cases were incompletely studied on account of unavoidable obstacles. The presence of partially studied cases in the various groups also diminishes the value of the numerous statistical studies of psychoses annually made in the State service.

While I would particularly advocate the establishment of an incomplete group, I should also question the necessity of an allied group as such, and whether its existence does not invite a certain slovenliness in diagnosis which the presence of a make-shift must imply to those who adopt other nomenclatures. At times I think it undoubtedly does, for the examiner's indecision in regard to a perplexing case is quite apt to find its solution in the convenient alternative of allying according to prominent symptoms, when a further examination of some of the points might have cleared up the case. Of course it is difficult to grasp all the issues at the initial presentations at staff meeting, but from the records, it is apparent that minor and irrelevant points are often so emphasized as to obscure more salient features. On the other hand, one can not inveigh too strongly against the futility of grouping a case as allied because of a dearth of crucial facts. An incomplete group containing cases of this last type, would undoubtedly be large, especially in the metropolitan districts, where we deal with many aliens who can not give intelligent or complete information of themselves, often on account of their unfamiliarity with English, and also many derelicts, who have become estranged from their friends and associates so long that no trustworthy anamnesis can be obtained. It would not be surprising to find in the hospitals drawing from a cosmopolitan populace from 5 to 10 per cent of all admissions classed as incomplete, most of which are now grouped with functional disorders.

Such a procedure would numerically reduce the unclassified group, which it is quite essential to retain, as a depository for such cases where full information is at hand, but which, in view of atypical features, can not be forced into one of the recognized groups. With such a revision, one could, I feel, easily dispense with both "allied to

dementia præcox," and "allied to manic-depressive as groups," allowing them to fall, as subdivisions, under the general heading of unclassified. This unclassified group should embrace such common symptom-complexes, which are still unsatisfactorily understood, as, the atypical manic-depressive, and dementia præcox reactions, the alcoholic manic-depressive symptom-complex, the alcoholic dementia præcox, the constitutionally quantitative inferior dementia præcox, senile excitements, and possibly others where the number of cases is sufficiently large to warrant separation.

An incomplete group would be no stigma on our work, and would not only be more logical, but would certainly facilitate future investigation, for the large number of incompletely studied cases in every group in every hospital impedes the research of unclear disorders.

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PSYCHOSES OCCURRING IN TWINS.*

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As a preface to this subject it is justifiable to make a few remarks on the general subject of twins.

The fecundation of more than a single ovum is not infrequent, numerous multiple births are recorded, and twin births have come under the observation of almost every physician. The most extensive record of multiple births is that of G. Veit, covering a series of 13,000,000 births in Prussia.

According to his statistics twins occur once in every 88 births. This ratio however varies among different races and in different countries, being more frequent in some and less in others. Thus in Bohemia, the ratio is 1 in 60; in Ireland, 1 in 64; in Scotland, 1 in 89; in France, 1 in 100; England, 1 in 116; New York and Philadelphia, 1 in 120.

The tendency to the occurrence of twins becomes greater in each successive pregnancy; multipara give birth to twins more often than primipara, but the latter are more likely to have twins the older they are when pregnant. In St. Petersburg the greatest number occurs during the seventh pregnancy in women who are between 30 and 40 years of age; in Hungary the same observations have been made, but in other countries the number is greater in women over 40 years of age.

The development of twins, as a rule, is from two ova, either from the same or opposite ovaries. They however may develop from a single ovum with a double germ, or a single germ may undergo complete fusion. Those developing from a single ovum are of the same sex; those from different ova may be of the same or opposite sex. According to Veit, both children were male in one-third of the cases; opposite sex in one-third of the cases and in a little less than one-third of female sex. English observers give

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different ratios; they find that both children are females far less frequently than that both are of the male or opposite sex.

As a rule there is some difference in the weight and only in about five per cent both children are of equal weight. In those of opposite sex, the male is usually larger but exceptions occur where the female is larger.

The occurrence of twins is always regarded as exceptional and they are less perfect and more feebly organized than single children. They are less likely to survive, and a mortality of one in thirteen occurs. Usually they show marked physical similarity and throughout life they have the same mental traits, tendencies, and inclinations. For this reason it is not remarkable that should one develop a psychosis, a similar condition might arise in the other.

I will therefore ask your attention to the consideration of the psychoses of the following twins who were admitted to this hospital:

JANE K. and ANNIE M. They were the children of Irish peasants, born in 1848, and second in line of birth in a family of four; one brother was about two years older and another two years younger. The father died following an accident when a young man and the mother remarried but had no other children.

She lived to an advanced age but had considerable worry over her second husband and late in life was said to have been demented; there were no other psychopathic tendencies as far as known.

While the patients were children they lived with a grandmother and received the usual education of children of their station in life; they learned dressmaking and millinery after leaving school. When about 23 years of age they came to America and were employed in a dry goods store. At the age of 24 Annie married a clerk and became the mother of a boy who died in infancy and two daughters who grew to maturity. At the age of 26 Jane married a grocery man and became the mother of a boy who died in infancy and three daughters who grew to maturity. They both led regular lives and had no unusual worries during the early years of their marriages. They were of quiet, retiring disposition, but Jane was inclined to worry more than her sister. Their physical resemblance was marked and one was often taken for the other.

JANE M. The patient's husband fell ill in 1892 and she was told that he would not live very long. She began to worry and became depressed, for she thought she and her children would be without a

home. For about three months she slept poorly and would walk the floor at night. On October 29, 1892, she was admitted to this hospital. She was in her 45th year; her general nutrition was good; menopause had occurred. Her mood was one of depression with persecutory and depressive ideas and auditory hallucinations. She said her neighbors had talked about her; they tried to poison her by stopping up the water pipe; she felt she had ruined her home and that she might be killed or something serious would happen to her. After her admission she was subject to episodes when she was noisy and disturbed. She called herself a murderess; she had destroyed the whole world and all was lost. She became quiescent, but her hallucinations persisted, and after a hospital residence of over two years she was discharged on December 17, 1894. When she returned home she was inactive and took no interest in her home or family. There was an increasing indifference and finally, on account of lack of personal cleanliness, she was recommitted on March 30, 1904. She was in her 56th year and in good physical condition. Her mental state was one of deterioration; there were no hallucinations and she expressed no delusions but said that perhaps God had punished her. She was filthy in habits and smeared her person and the furniture with feces. She improved in her habits and became more cleanly some time after her admission; orientation and memory showed no marked defect. She lacked interest in affairs and was contented with her condition and surroundings. Her physical condition remained good but on several occasions she had an attack of erysipelas. In April, 1911, signs of pulmonary tuberculosis developed; symptoms of cerebral hemorrhage and a left hemiplegia occurred and she died on September 10, 1911, when in her 64th year and eighteen years after the onset of her psychosis.

ANNIE M. There were no unusual worries in her life until she was about 47 years old, and then her husband became unfaithful to her. She began to worry, took to drinking considerably, and about a year later separated from him and lived with her daughters, one of whom had married. She ceased drinking except to take an occasional glass of beer. No active signs of mental derangement were observed until she was about 56 years old. Her married daughter moved to New York City and she was left alone most of the time in a flat in Hoboken. She became depressed, could not sleep and was afraid to be left alone; she thought a curse was upon her. She was brought to the home of her daughter in New York but showed such an uneasy and depressed state that it was thought advisable to place her under treatment, and she was admitted to this hospital on May 20, 1904, eight weeks after the onset of acute mental symptoms.

She was in an anxious, uneasy, depressed state, moaned in a low tone, and had ideas of fear and impending danger. Orientation was good and memory showed no impairment except that she could not recall dates very well. She had considerable appreciation of her con-

dition. Physically she was well nourished, the pupils reacted to light, but the reflexes in the upper extremities were diminished and the knee-jerks were absent. Urine contained five per cent of sugar, albumen and casts.

Her mental condition showed no change for several months and she worried about her children; she thought her daughter had gone astray and one night imagined she heard some one say that she had been taken to prison. She also expressed the idea that all her relations were either dead or in prison and that she had no home.

Gradual improvement occurred, the depression disappeared, she became interested in affairs about her, and on October 3, 1904, about four months after admission, she was discharged recovered. Nothing abnormal was observed about her at home and her general health remained good. Diabetic gangrene and dropsy developed and she was admitted to one of the city hospitals where she died after a short period in June, 1906, when 58 years of age.

The psychoses in these patients developed after much family trouble and the predominant feature was a depression with uneasiness and anxiety. They were both in the involution period of life. In the one there was a long prodromal period, only a transitory hallucinosis and her psychosis ended in recovery. The other, who is described as more retiring and inclined to worry, developed an acute psychosis, hallucinations were prominent and she passed into a condition of deterioration.

ELLEN and MARY O. These patients were of Irish parentage, born in 1873, and first in line of birth in a family of five girls and one boy. The maternal uncle was insane but nothing is known of the nature of his psychosis. Both parents were alcoholic, and the mother developed a psychosis, was admitted to this hospital, but later was discharged as improved. She had paranoic ideas directed against her husband and son.

As children the patients were delicate; they resembled each other, but Mary was less robust than her sister. Both had a simple and shallow disposition but Ellen was considered to be less stable. They were religiously inclined and at one time wanted to enter a convent but were dissuaded from doing so. They graduated from public school and then began to work in a store as salesgirls. Both remained unmarried.

ELLEN O. She began to worry because she was out of employment, and then passed into a state of depression with suicidal tendencies. When admitted to this hospital on November 14, 1895, she was 22 years of age and her physical condition was good. She had ideas

of a depressive nature; said her head felt like a blank, she had ruined her family by what she had said and done.

Later she passed into an excited state, showed psychomotor unrest, and was flippant, flighty, and at times obscene and profane in her conversation. Again there were periods when she was quiet and did not speak. Two years after her admission she began to improve. After a period of about three years in the hospital she was discharged recovered on August 29, 1898. She became excitable and difficult to control at home and finally, on account of violent and assaultive tendencies, she was re-admitted at the end of three months on December 6, 1898.

She was in a maniacal condition, unreasonable in her demands, spoke in an abusive manner of her parents, wanted to get married. There were periods when she was excited and again she was careless, simple, and childish. Gradual improvement occurred and she was discharged the second time as recovered, after a period of about two and one-half years on April 15, 1901.

She was sent to some relatives in the West but became excited, returned to New York City and was admitted for the third time on May 9, 1901, three weeks after her discharge. She again was in a maniacal state, and talked in a rambling and disconnected strain. Since her last admission she has been in the hospital continually and usually is quiet and well conducted. At times there are episodes of short duration when she is talkative, flighty, and inclined to be assaulting. She is simple in her manner, talks in a nervous way, shows poor judgment, and no good insight into her condition. Her orientation is good but she shows a defective memory for dates.

MARY O. About a year after Ellen was admitted to this hospital, the health of Mary became impaired, and after fainting at her work one day she was obliged to remain at home. She passed into a state of depression with suicidal tendencies, and when in her 24th year she was admitted to this hospital on July 24, 1897.

She said she worried over her sister, wanted to come to her, wished to die. Later she became maniacal, was flippant, stubborn, and assaultive; she was subject to paroxysms of weeping and became dull and stupid. Gradual improvement occurred, she became quiet and coherent in her conversation, but was simple in manner and lacked character. On April 2, 1901, after a hospital residence of about three and one-half years she was discharged recovered.

She resumed work and was efficient. In August, 1904, she had some sexual relations and her menstruation failed to appear. She thought she was pregnant, became depressed, thought there was no use in living and wanted to die; occasionally she heard voices at night. She was recommitted on September 8, 1904. Her mood was one of depression and there was mental and motor retardation. When her menstruation was established her depression disappeared and three weeks after her admission she was discharged as recovered. She re-

sumed work and there were no abnormal mental symptoms. About three years later, following loss of employment, she again became depressed and committed suicide at her home by inhaling illuminating gas.

The psychoses in these patients was of a recurrent nature with alternating periods of excitement and depression. Both manifested symptoms at approximately the same period of life; the one who was less stable has been a hospital resident almost continually up to the present time; the other was able to remain at home for a much longer period before her second admission, and after her discharge she remained well mentally for three years and then had another attack of depression and committed suicide.

FLORENCE N. and CONRAD E. They are of Swedish parents, born in 1883, the second set of twins and last in line of birth of a family of six children. The father died of an infection following a burn; the mother died of diabetes. A brother and sister died of tuberculosis when of adult age. As far as known there is no insane heredity.

Florence was a delicate baby and until she was 5 years of age she was subject to convulsive seizures, usually dependent on some gastric disturbance. She was always nervous.

Conrad was more robust but when about 14 years old he was thought to have tuberculosis; his health however improved and he developed normally. Both were of medium size; they resembled each other in features and had similar inclinations. In school they were as bright as other children. Florence later became a milliner and Conrad a coppersmith. She married but he remained single.

FLORENCE N. When about 18 years old she thought she was suffering from tuberculosis; she became depressed and imagined people were trying to harm her; she felt she was burning up and was to be electrocuted. She remained at home and at the end of six months apparently had recovered. She worked, and in 1909 was married and the following year became the mother of a child.

Her husband noticed that she was worried about her brother and for about a year would drift in her conversation and use stereotyped phrases. She became jealous, irritable and finally so excited that she threw things at him. On September 6, 1911, she was admitted to this hospital when 28 years of age. She was simple and superficial in her replies and smiled a great deal; any question which required mental concentration was answered incorrectly. Orientation and memory were good and no delusions or hallucinations were present. Physical condition showed good nutrition; there was a slight systolic murmur at the apex of the heart.

She has shown no mental improvement up to the present time and shows no interest in ordinary affairs. She makes loose statements and exhibits no insight into her condition; her mood is usually one of good humor, but at times she becomes irritable.

CONRAD E. He was always greatly attached to his mother, and when she died he began to drink and became erratic and careless in his conduct. During a period of four years he worked irregularly and would at times go away from home for months, and when he returned gave no explanation where he had been. He was arrested and sent to the alcoholic ward of Bellevue Hospital, but there his mental condition was recognized, and he was later admitted to this hospital, three months before his sister on June 17, 1911.

He was mildly elated, smiled a great deal and was flippant in his replies. He complained of hearing voices of a vile and obscene nature and thought they were caused in some way by Christian Science. Orientation and memory were unimpaired. Physical condition showed nothing of importance.

He has shown no improvement up to the present time; the hallucinations continue but he does not seem disturbed by them; he smiles a great deal and when talking about his ideas on Christian Science he becomes rambling and quite disconnected. He works in the hospital and is contented with his condition and surroundings.

One of these patients had a depression at the age of 18 from which she apparently recovered; there were also ideas of a persecutory nature. At the age of 28 she again showed evidence of mental derangement. The brother began to show symptoms of his psychosis when he was 24 years of age and hallucinations have been prominent in his case, but have not been observed in the sister.

Both of them show looseness of thought and have lost interest in affairs. Since they have been under observation there has been no improvement and the prognosis is considered ominous and it is anticipated that a considerable degree of deterioration will occur.

GEORGINA and SARAH K.—The parents were Irish; the father had an apoplectic attack at the age of 55; the mother suffered from rheumatism and died at the age of 56 years; she was a woman of nervous temperament. They were born in New York City in 1861 and are third in line of birth in a family of four children; the two eldest died in infancy. They were delicate children, but Georgina was always nervous and less robust than her sister. After graduating from public school she remained at home and did the house work, but Sarah went out to work at upholstering. They were of quiet disposition

and regular church attendants. After the death of both parents they continued to keep house but regularly received some financial assistance from the church which they attended. Neither married or had any love affair.

Georgina, in 1905, had a long rheumatic attack and was confined to bed for several months; she began to complain of a telephone in her ear and of accusing voices. Noises in the house frightened her and she thought people on the street were calling her names. There was a cessation of these symptoms during a short period while she was away from the city but they recurred when she returned. She was admitted to this hospital on November 8, 1906, when 45 years of age. She stated that she began to be troubled by annoying voices about eighteen months previously following an attack of rheumatism. During the examination she reacted to hallucinations. There was no defect in orientation or memory; she said she was nervous but not insane.

Her nutrition was poor; she had a chronic catarrh of both ears and hearing was impaired; reflexes were exaggerated and a coarse general tremor was present; arteries were moderately thickened. She has remained in the hospital since admission and throughout this time there has been no cessation in the hallucinations. She complains of being annoyed and persecuted and occasionally has outbursts of irritability. Her orientation and memory remain good. She has no insight into her mental condition and her judgment defect is shown in that she wants to leave the hospital but does not know where she will go or how she will support herself.

Sarah is employed in the city but has no permanent place of residence, and whenever she visits her sister she has some new plan for her; she does not think she is insane and says she should not be detained here. She blames the church visitor for her commitment and thinks that the church should take up the cause of both herself and her sister. She now does not attend the same church, as she does not want to associate with such a hypocrite as the church visitor. Her ideas show a decided paranoid trend and she apparently is gradually approaching a definite psychosis.

The one sister in these twins has developed a psychosis of a paranoid nature based on hallucinations of hearing. She was always less robust and her mental symptoms seem to have followed a prolonged attack of rheumatism. The second sister also has some paranoid ideas but no hallucinations are present; both apparently have always been somewhat inferior; they always received aid and protection from others and never accomplished very much in life.

MARY D. and SISTER. The parents of these twins were Irish peasants and, as far as known, no member of the family was insane.

They were fifth in line of birth in a family of five girls and one boy and were born in Ireland in 1871. Their education was meagre and they always lived on a farm; their general health was good; they showed considerable religious fervor and the life of a nun appealed to them.

When 20 years of age Mary came to America and was soon after followed by her sister. They were employed as domestics and after several years married. Mary became the mother of four children; her second pregnancy resulted in twins but one died in infancy. She was not alcoholic but drank coffee and tea to excess.

After her marriage she continued at work but she began to neglect her duties, became cranky and devoted much time to religion. She began to have hallucinations and thought the Lord talked to her; there was a gradual increase in her symptoms during a period of two months and April 6, 1897, she was admitted to this hospital when 26 years of age. Her mood was one of depression and she usually was preoccupied with religious thoughts; when disturbed in any way she became violent and assaultive. She complained of having heard voices and knockings at the place where she was employed; she thought she would be poisoned and contaminated by those about her. She was pregnant and seven months after admission gave birth to a full term child. Her mental condition gradually cleared up and on July 1, 1898, she was discharged and apparently made a complete recovery when she returned home. She became the mother of several children and showed no abnormal mental symptoms.

In 1903 she became the janitress of a house and was annoyed greatly by the tenants. She became moody, despondent, and cranky, and after an episode of excitement was arrested and later admitted to this hospital on October 9, 1903. At first she was irritable, suspicious and showed religious pre-occupation. She gave an account some time later of an hallucinatory episode when at home: she heard noises and talking, became frightened, and thought the house was haunted. At times she refused food because it was forbidden by God and she thought she had sinned. She gradually cleared up mentally and was discharged recovered on January 16, 1904, after a hospital residence of about three months.

The deaths of an elder sister and of her twin sister occurred a short time after her return home but she did not appear to be affected in an abnormal way; during the following summer she complained of headaches on several occasions. In the autumn she became very religious, went to church a great deal and wanted to have masses said for her sisters. She became depressed, neglectful of her home, and finally refused to stay in the house. On November 9, 1904, she was admitted for the third time. At first she was dull and indifferent but later she became variable in her mood; at times mildly elated and again self-absorbed, irritable, and mildly sarcastic. She later stated that she had worried about her sisters; that she took considerable tea

and coffee and was unable to sleep at night. She began to hear voices, thought spirits were in the room at night and she wanted to die.

Gradual improvement occurred, she became less irascible, and was discharged as recovered on January 7, 1905. Since this time there has been no recurrence of mental symptoms.

The psychosis was of a recurrent nature and hallucinations of a transitory nature were always present in the beginning of the attacks. At the time of her first admission she was pregnant; her second followed unusual annoyances when she was a janitress and the third followed the death of her sisters. She was always an excessive tea and coffee drinker and at the onset of each attack her sleep was poor and she stated she would take large amounts of those beverages; the attacks therefore may bear some relation to a toxic etiology.

The sister did not develop a psychosis; she showed nothing abnormal but was always very religious up to the time of her death.

CHARLES W. C. He was of Irish parentage, born in New York City and seventh in line of birth in a family of eleven children. He was the survivor of male twins, the other having died in infancy. His father died in middle life but his mother was living and well.

From early childhood the mother noticed that he was not like the other children but was quiet and seclusive; he learned well at school and later became an efficient printer. As far as known he had no bad habits.

The first thing that attracted attention was that he remained at home and did not visit his other brothers and sisters in the city. At the end of six months he had a sudden episode of excitement during the night; he had hallucinations accompanied with fear and thought he was to be poisoned. For two weeks he remained more or less excited and then he became mute and began to develop peculiar mannerisms like puffing out his cheeks. On February 1, 1906, he was admitted to this hospital when 26 years of age. He was resistive, exhibited mannerisms, and at no time while under observation was he sufficiently accessible to determine his mental content. The greater part of the time he was mute and in a catatonic state. Muscular stiffness and constrained attitudes were prominent features. He usually was tube-fed and his nutrition finally became so reduced that he passed into a state of exhaustion and died, after a hospital residence of almost three years, on December 11, 1908.

In reviewing these cases it appears that the number of twins who develop psychoses is small as compared with the

frequency of their occurrence; females are more frequently affected than males. There is a similarity in the makeup but some disproportion is present and one shows a greater weakness than the other. The psychosis develops earlier in the weaker one and shows a greater tendency to recurrence or to end in deterioration. In most of the cases when one developed a psychosis, only a comparatively short interval elapses before the other either evidenced the prodromes or developed a psychosis with similar symptoms.

Finally it is observed that the single children of the family apparently had a stronger makeup, for even though there was a marked psychopathic heredity in two of the mothers only, the twins of the family developed a psychosis.

CHRONIC PARANOID DEMENTIA FOLLOWING ACUTE ALCOHOLIC HALLUCINOSIS.

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Chronic paranoid dementias succeeding acute alcoholic hallucinoses are of rather infrequent occurrence and are seen more commonly in males than in females. In the three cases investigated, the disorder developed between the ages of 35 and 40. It is often very difficult to decide whether we are not dealing with a potential, early or well developed case of dementia præcox, in which, for a time, the alcoholic coloring clouds the fundamental condition. The difficulties increase in proportion to the deficiencies of the anamnesis, especially with our lack of information as to the patient's makeup, of history of previous attacks, tolerance to alcohol, the kind, amount, and frequency of alcoholic imbibition, the reaction of the individual to its toxic influences, and the onset of the presenting attack. Even with all these facts at hand, the symptom-complex may, for a time, be quite puzzling and the prognosis remain in doubt until some time has elapsed. One naturally excludes, by careful physical and serological examination, such conditions as general paralysis and other organic disorders in which alcohol may participate in the causation. Episodes in constitutionally inferiors and emotional disorders, such as manic-depressive insanity, in which alcohol may play an important or minor causative rôle, are likewise to be excluded.

CASE 1. W. W. An efficient tinsmith; single; 38 years of age; since 20 heavily alcoholic; is said not to have been especially susceptible to toxic influences. Nothing abnormal noted in his makeup, other than an aversion to the society of woman.

At 31, after excesses, he developed a fear reaction and imagined he was followed by men. This condition lasted three days. At 32, he developed another transitory apprehensive state, after excessive drinking. Our information regarding this episode is somewhat defective.

At 57, or six months before admission, he heard voices for a night. It was thought that at this time he had not been drinking more than usual. One month before admission, he drank heavily; developed a fear reaction; barricaded himself in his room; heard voices say he was going to be shot; saw men with a bottle of blood in their hands outside the window and would not take food, fearing it was poisoned.

On admission (January 11, 1909) (age 58) he appeared dull, anxious and brooding; had little to say, but showed no open fear or apprehension; admitted previous imaginations, but denied delusions or hallucinations at the time of the interview and since admission to the hospital.

He continued in the same condition until six weeks later, when auditory and visual hallucinations became prominent. He appeared more anxious; somewhat uneasy, but was not actually apprehensive; showed considerable tendency to systematize his delusions. Three months after admission, hallucinations of the lower senses appeared in the form of electric sensations and gustatory and olfactory false sense perceptions. The persecutory hallucinations continued and sexual hallucinations were in evidence for the first time. In addition, many peculiarities in his conduct were observed.

During his hospital residence he has shown some improvement; works well on the farm; is quiet; good-humored, but his imaginations continue and he becomes reticent when they are broached.

The history of transient hallucinations of hearing, six months before admission, without any positive history of any marked alcoholic excesses, their subsidence and the reappearance of persecutory hallucinations, associated with fear reaction upon heavy over-indulgence, the rapid deffervescence and replacement of affect of fear with dullness and more or less apathy, together with a rapid development of hallucinations of the lower senses and those of a sexual character, pointed to a chronic paranoid disorder in which alcohol seems to have been an important etiological factor.

From the anamnesis, we learn that the patient was averse to the society of women, preferring to drink and associate with his own sex. Whether this represents a difficulty in sexual adaptation, we are unable to say. In the psychosis we do not find references made to homo-sexual practices, but hallucinations which might be possibly construed as such were mentioned by the patient. An analysis of this important point was impossible on account of lack of co-operation.

CASE 2. M. H. A longshoreman; age 39; married, but wife was compelled to leave him on account of his habits; a chronic alcoholic for years; when drunk, became quick-tempered and combative; sexual life unascertained.

Six weeks before admission, while drunk, fell into the hold of a ship and received severe trauma to leg. No mental symptoms appeared until two weeks later, when a delirious condition developed. He saw mice, rats, snakes; thought the patients cast slurs upon him; imagined he was watched and followed; heard voices say he was to be killed; showed considerable confusion; fabricated extensively regarding recent events, and finally in response to the hallucinations, became very much excited and assaulted other patients.

Upon admission December 15, 1908 (age 39), this excitement had subsided. He appeared quiet; loquacious; rambled a little in his talk; showed no fear or apprehension; admitted previous imaginations, but denied delusions or hallucinations at the time of interview; memory for recent events and retention were impaired; orientation fair, and he still exhibited considerable tendency toward elaboration and fabrication. However he showed considerable insight, readily admitting that drink was the cause of his troubles.

He continued quiet and orderly and appeared on the way toward recovery, but three weeks later hallucinations of a persecutory character reappeared and he became noisy and assaultive. At this time memory and orientation had improved and the tendency to fabricate had disappeared, and even in the presence of the hallucinations he continued to show considerable insight.

Four months after admission, in addition to the persecutory voices, homosexual hallucinations developed. Insight was lost, and finally there developed a dementia præcox-like reaction, in which hallucinations of a homosexual nature continued prominent.

At the present time, he shows a rather elevated mood; has lost interest; will not employ himself, and the delusions and hallucinations above mentioned are still in evidence.

An analysis of this case has not been possible, owing to the fact that the patient has been transferred to one of the other State hospitals. Of his inner life, we know nothing; neither have we any information as to the cause of the sprees, other than through association with fellow workers. That he evidenced a certain degree of deterioration prior to the onset of his psychosis, is seen in his chronic alcoholism, its attendant effect upon his working capacity, and in the indifference and neglect which he exhibited toward his family. The soil appears to have been especially favorable for the development of a chronic psychosis.

The case differs from the usual form of acute alcoholic hallucinosis, in that, first, a chronic progressive psychosis followed a first attack of acute hallucinosis; second, the initial phase was atypical, and third, the presence of considerable insight while marked psychotic manifestations were present. Whether the homosexual component appearing later in the psychosis had a definite relation with earlier interests or practices, we are unable to say.

CASE 3. M. A. Female; age 35; single; bookbinder; chronic alcoholic for years; easily affected by liquor, but exact reaction not known; efficient when sober; marked emotional instability since youth.

At 15, a transient outburst of excitement lasting a day. At 27, began illicit relations with an alcoholic individual and drank more heavily. At 29, broke off relations with this person, upon learning he was married; developed despondent spells; took refuge in alcohol; several times was sent to the workhouse. At 31, after a spree, developed a typical alcoholic hallucinosis, and after three weeks' residence in this hospital was discharged "recovered". It was noted that following the acute phase of the disorder, she displayed considerable emotional instability. At 34, after another spree, developed a second attack of a similar nature outside the hospital, with rapid recovery. At 35, became despondent on account of worry over mother's death; developed subjective mental symptoms; drank heavily and an acute hallucinosis appeared for the third time, in consequence of which she was admitted January 1, 1910, (age 35).

At this time, was restless, excited, extremely apprehensive; reacted constantly to auditory hallucinations of a terrifying nature, and showed some tendency toward systematization. In a few days her mood exhibited marked fluctuations, although the hallucinations continued. In the course of a few weeks the hallucinations seem to have disappeared, but she was noted as being irritable, sullen, depressed. In a short time she brightened up; worked fairly well and ten weeks after admission was considered sufficiently improved to leave the hospital. While on the way to her place of employment, she became irritable, excited and abusive and was returned to the hospital. It was then learned that hallucinations of sight and hearing were present and that these had occasioned the change in her condition. Four months after admission, hallucinations of the lower senses, together with sexual hallucinations, ideas of influence and expansive ideas developed, and a chronic psychosis, resembling the dementia præcox type ensued. Her insight, which was present for some time after admission, then disappeared.

This case differs from the preceding one in, that, we are dealing with an individual with a makeup probably related to the manic-

depressive type. In the last two attacks it is to be noted that she exhibited a rather labile mood, but this is not always an untoward symptom, as it is frequently seen in other alcoholic conditions such as delirium tremens and Korsakow's psychoses. A rather interesting feature is that she had two prior attacks of acute alcoholic hallucinosis, from which she recovered, and in the last attack a temporary remission appears to have taken place, during which she exhibited considerable insight.

Summary. Of special interest in the three cases present is the following:

(1st). All three patients developed their psychoses between the ages of 35 and 40. (2d). The symptomatic picture when fully developed is comparable with cases of paranoid dementia præcox, occurring without the influence of alcohol, and the prognosis appears to be the same. They, however, differ from dementia præcox, in that acute fear reaction is present in the earlier phase of the disorder. (3d). The appearance of ideas of influence, somatic sensations and sexual hallucinations seems to have marked the beginning of mental disintegration. (4th). In all three cases as in dementia præcox, the sexual component is present. (5th). A dementia præcox makeup was not in evidence, with perhaps the exception of the first case. The third patient had a very bad heredity, several members of her family being manic-depressives and chronic alcoholics. So far as we could learn, there was no hereditary history in the other two cases. (6th). Two of the patients gave a history of earlier episodes of fear after alcoholic excesses. (7th). In the second case we have a history of early atypical features in the form of delirium. (8th). Remissions appear to have taken place in all three cases and in two, the patients had insight for a time. (9th). The typical fear reaction emphasized by Bonhoeffer was present only for a transient period.

Conclusions. In answer to the question—Can a chronic paranoid psychosis be induced solely through chronic alcoholism? I find it extremely difficult to arrive at an opinion regarding the place of alcohol in the etiological constellation on account of the various other factors to be taken into consideration, such as heredity, makeup, indi-

vidual susceptibility to alcohol, and other endogenous and exogenous factors. The usual run of cases of paranoid dementia præcox, developing at the age of these patients, are not as a rule chronic alcoholics, and the question arises, Would these patients have developed psychoses in the absence of chronic alcoholism? Non-alcoholic paranoid states, at the age of the patients under discussion, rarely give a history of earlier episodes. Another interesting question is—Can a characteristic alcoholic coloring in a case of dementia præcox occur without the presence of alcohol? I do not think at this time we are able to give a positive answer.

In the first case, we have to contend with the difficult question whether or not the two early episodes of apprehension and fear represented earlier phases of a more fundamental disorder. There is nothing, however, in the character of the reaction that would suggest that such a condition presented itself. Episodes like these are common in chronic alcoholics upon constant over-indulgence. The hallucinations appearing six months before admission do not seem to have been provoked by any unusual excesses, but their reappearance five months later, did develop in connection with over-indulgence, and doubtless the latter had much to do with precipitating the onset of serious mental symptoms and for a transient period gave an alcoholic coloring to the clinical picture. There is a probability that the first patient was what Bleuler called a schizophrenic individual, who was a chronic alcoholic, and that chronic alcoholism in his case represented a disease-symptom, and also played a part as an etiological factor. In the second and third cases, chronic alcoholism appears to have represented both a symptom and cause of the progressive mental disorder.

The literature upon this subject is quite extensive, and it is interesting to note the divergent view taken by different investigators. The Freudian school have lately taken up the question of chronic alcoholism and its relation to the sexual component. Some of the psycho-analysisists claim that individuals with homosexual tendencies become

chronic alcoholics on account of the opportunity afforded them of gratifying their libido through association with male companions in drinking places. It is interesting to note in this connection that the second patient developed homosexual hallucinations, but unfortunately we were unable to analyze this factor. Bonhoeffer, in speaking of chronic paranoid dementias following alcoholic hallucinosis states, that recovery, as a rule, follows the first attack of the latter. This statement appears to be substantiated by the history of the first and third case. He cites a case of chronic paranoid dementia following repeated attacks of acute alcoholic hallucinosis, and states that this condition may ensue upon continued excesses. He also maintains that acute alcoholic hallucinosis develops more often in individuals who do not show alcoholic delirious reactions, as delirium tremens and Korsakow psychosis. Therefore, the question naturally arises—"do we ever find a chronic hallucinosis following an atypical delirium?" In the atypical deliria, characteristic delirious features are mixed with a more or less extensive auditory hallucinations, or even hallucinations of the lower senses. It would appear that we have a history of a rather atypical delirium in the second case at the onset of the psychosis. It may, perhaps, be found true that an early atypical delirium, as well as the appearance of hallucinations of the lower senses and sexual hallucinations, offers a bad prognosis. I would here state that no case of Korsakow psychosis under my observation has been followed by a chronic progressive paranoid dementia, and it is also extremely doubtful whether the same condition ever follows a frank case of delirium tremens. It would appear, then, that the greatest danger of progressive paranoid dementias occur in connection with acute alcoholic hallucinosis.

Kräpelin believes in a chronic paranoid psychosis of alcoholic origin and regards the development of such a disorder as of too frequent occurrence to be merely accidental. Bleuler states that he has never seen a case of chronic alcoholic paranoid dementia, and in those so regarded, has always found that he had to do with schizophrenics who

were chronic alcoholics. He, however, admits that such cases may be found in the clinical material of other countries. Stoecker looks upon chronic alcoholism as a definite symptom of mental disease, and also doubts the existence of a specific paranoid dementia of alcoholic origin. He states that chronic alcoholism may precipitate fundamental disorders and give a temporary alcoholic coloring to certain disease-pictures. Graeter, in a study of eleven cases in one of the Swiss hospitals for the insane, which at one time or another had been regarded as belonging to the alcoholic group, found, upon more thorough investigation, especially with reference to the patient's makeup, and a careful study of the supposed earlier transitory alcoholic upsets, that he had to do with dementia præcox, associated with chronic alcoholism. He maintains that a specific form of chronic alcoholic hallucinosis of a paranoid nature is not yet proven. Wernicke agrees with Bonhoeffer that recovery usually follows the first attack of acute hallucinosis, but that if excesses are continued an irrecoverable chronic psychosis may develop.

The tendency then, at present, is to minimize the importance of alcohol as an etiological factor in mental disease, and to regard its occurrence chiefly as a psychotic symptom. That chronic alcoholism is a causative factor as well as a symptom of mental disease is seen in the deterioration of a mental and physical character produced by its long abuse, and the induction of such definite clinical entities as delirium tremens and Korsakow psychoses. From the psychogenic point of view, alcohol seems to be but one of the factors entering into the etiological constellation. The psycho-analytic school regard complexes as of paramount importance.

Inasmuch as psycho-analysis of these cases is extremely difficult and often impossible, I would suggest that efforts be directed toward analysis of cases of acute alcoholic hallucinosis whenever feasible. If this is effected, we then have material at hand upon which to base further psychogenic studies, should paranoid-like dementias subsequently develop. Particular attention should be paid to the make-

up, sexual life of the individual, cause of alcoholic habits, his reaction to the same, etc.

In closing, I would call attention to the importance of a searching anamnesis, not only from one member of the family or friends, but from all available sources. A deficient anamnesis is the usual stumbling block in the way of correct interpretation of these cases. Further, in order to promote thorough investigation of symptomatic groups upon uniform lines, I would suggest the preparation of special mental outlines, in which the problem to be attacked is concisely stated. By this means the physician making the mental and physical examination would have a clear conception of the problems in view, and the subsequent work of reviewing the cases would be made much less difficult.

THE PREVENTION OF INSANITY.*

BY WILLIAM L. RUSSELL, M. D.,

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Insanity is such a complex condition that its prevention is a social as well as a medical problem. For this reason it seems advisable to spread abroad the explicit and useful facts concerning it which have now been gathered, and to make an organized effort to apply them to prevention.

At least fifty per cent of insanity is due to generally recognized disease producing causes which are known to act by interfering with the structure and functions of the brain. These causes are identical in character with those which produce disease generally and are principally of the kind which have been dealt with most successfully in the field of preventive medicine. The prevention of insanity thus produced may, therefore, be reasonably looked upon as quite within the range of possibility. It is not a mysterious visitation but is the outcome of such plain causes as injury to the head, an infection, or a chemical poison. The quickly produced somewhat temporary effect on the mental activities produced by these causes are of common occurrence and all are familiar with them. There is no difficulty in connecting cause with effect. The more lasting effects which may be produced gradually and insidiously are, however, more likely to escape recognition, and to connect them with the essential causes requires more careful observation and thought. Insanity sometimes results from infection by typhoid fever, influenza and other infectious diseases, or from the infection of a wound, or of a woman after childbirth. More frequently it is produced by the action of the more slow acting infections, such as syphilis. Syphilis alone is the essential cause of the insanity of twenty per cent of the men who are admitted to the institutions for the insane from the large cities. These patients suffer from paresis or general paralysis of the insane and are referred to as paretics. The disease is

* Read at the New York State Conference of Charities and Correction, November 20, 1912.

much more prevalent than is generally supposed. Dr. Salmon has drawn attention to the fact that in New York State alone in 1911, more deaths occurred from it than from smallpox in the whole United States, and half as many as from typhoid fever in the State. It is one of the remote effects of syphilis and may appear years after the original infection. The cases are often in the prime of life and vigor, and they are soon reduced to a pitiable state of physical and mental weakness and die usually within three years.

The chemical poisons which effect the brain in such a way as to cause insanity are principally alcohol, opium, cocaine, lead, coal tar compounds, such as enter into headache nostrums and soporifics, and a few other stimulants and narcotics. Alcohol especially is so generally used that its injurious effect on the mental activities is most frequently seen. The effects of acute intoxication are well known, and such conditions as delirium tremens and the confirmed drink habit are generally familiar. The more lasting mental disorders produced by alcohol, such as persistent hallucinations of sight and hearing, delusional states, and all grades of impairment of efficiency and permanent mental deterioration are not as well known to people generally, though their characteristics are frequently so distinctive that the cases are classified separately as cases of the alcoholic insanities, or psychoses. About twenty per cent of the men admitted to the institutions for the insane are cases of this class.

For obvious reasons, insanity due to syphilis and alcohol is seen less frequently among women than among men, and among patients from the country than among those from the city. The influence of these factors is by no means limited to the causation of specific forms of insanity. They are important contributory factors in the causation of other forms, and have also a profound influence in originating degenerative processes which show their effect in deteriorating the stock so that weak individuals with a tendency to insanity are produced. Heredity is an important factor in the prevalence of insanity and always will be

unless the influences which originate degenerative processes are controlled. There is, I believe, at present, a tendency to put too exclusive an emphasis on heredity as a causative factor in insanity, important though it is. Great care is taken by the State hospital physicians in obtaining full information concerning the family histories of the patients admitted, yet the statistics of the State Hospital Commission show that in about half the cases nothing significant is discovered. Studies in heredity do, indeed, show that in accordance with known laws, a strain of mental defect may appear in a family from generation to generation. The individuals in which such a strain is present, are more than ordinarily vulnerable to the upsetting factors in their lives which tend to produce mental disorders of various kinds, and some of them are distinctly feeble-minded. Segregation of certain members of such families with a view to the prevention of parentage, if for no other reason, is highly desirable. Sterilization by surgical operation may also be desirable in some instances. Wholesale, arbitrary methods are, however, impracticable and proper discrimination is only possible after careful study by experts. The effects of the operations proposed on the individual and with reference to society have not yet been sufficiently studied to permit of defining the field clearly enough. How much better it would be if the State would provide more liberally for the scientific study of such important problems. In what private enterprise would anything like such a delicate, complex, and serious undertaking as the sterilization of even the lower animals with a view to improving the stock be taken up in an amateurish way, without full knowledge and without a carefully formulated plan made after prolonged study of the most highly qualified experts available? The State is altogether too parsimonious in applying scientific methods, and much more would be accomplished by carrying out more efficiently the well matured and generally approved plans of the executives of the different departments than by rushing into hastily conceived short-cuts which are sure to be disappointing. In any plan for the improvement of the race,

the influences which initiate in the individual the deterioration which finally appears in the stock can surely not be ignored. Let us not in our pursuit of eugenics, be turned aside from dealing with detrimental conditions which, all about us, are impairing the happiness and efficiency of individuals now.

Diseases which are caused by the introduction into the body of micro-organisms, or injurious chemicals, or by physical violence, or by some other single essential cause are more clearly within the possibility of prevention than any other type of disease. Preventive medicine and sanitary science have won their greatest triumph in this field and the public has become acquainted with the methods which must be employed and with their purpose and value. The knowledge that at least half the insanity is thus produced should, therefore, stimulate effort and bring renewed support to the measures which have been devised for controlling infections, safeguarding against physical violence, and limiting the danger from the use of poisonous chemicals. Especially should the question of venereal prophylaxis be given more effective attention. It is time for the public to understand that the question is much broader than that of merely protecting individuals who may deliberately expose themselves to infection through impure sexual contact. The extent to which infection is conveyed to the innocent and the effects on the stock are alone sufficient grounds for requiring that these diseases be dealt with by the public health authorities in the same manner as other infectious diseases. Liberal support should also be given to the scientific study and to the diffusion or correct information concerning the effects of alcohol and other poisons which are frequently introduced into the body. Facts even more convincing than those now available are needed as a basis for framing more effective measures for dealing with the alcohol problem. The reduction in the number of cases of insanity from morphine and cocaine which has been noted during the past few years, is an illustration of the value of well administered suitable legislation for controlling the use of the less frequently used poisons.

The full extent of the influence of the effects on the brain of disease producing germs and poisons in the causation of insanity can not probably as yet be fully grasped. In some instances in which it is suspected convincing facts can not always be obtained. Not infrequently in such instances, privation or fatigue are known to have been factors in the causation, and the condition is sometimes regarded as infective-exhaustive. In other instances injurious substances seem to be produced in the body itself as the result of disturbances in the activity of various organs, systems, and glands upon which the healthy action of the brain is dependent. But after all the known and presumable causes and conditions which operate by directly interfering with the integrity of the brain are noted, there still remains much insanity which can not, at present at least, be thus accounted for. Even in regard to this insanity something has, however, been learned which can be of service in bringing about prevention.

The term insanity is not applied to any specific form of disease. Its significance is legal and social rather than medical and scientific. It is only when thinking and acting have become so disordered that the individual becomes incapable of the ordinary adjustments in domestic, social, and business relations that he is considered insane. The processes by which the condition may be brought about are numerous. They may operate by interfering directly with the structure and functions of the brain, or by interfering with other organs or glands upon which the healthy activities of the brain are dependent. Or the essential factors, so far as we can now determine, may be mental. They may be difficulties in mental adaptation or adjustment some of which can perhaps be understood and dealt with as affectively as the simpler physical causes. The upsetting difficulties belong in some instances to the adaptation of intense instinctive cravings to the requirements of rational or conventional control and direction, and in others to the ordinary domestic, social and business adjustments.

Insanity is, therefore, in some measure a social disorder, and the whole responsibility for the break in adjustment

can not always be properly placed upon the individual. Certain types of personality are, indeed, more liable to have difficulties in adaptation and adjustment than others. It must not be assumed, however, that the individuals must necessarily be inferior. They do not all become insane by any means. Many of them are quite above the average in intellectual vigor and efficiency. In fact, some of the most valuable contributors to the progress of civilization have been made by individuals of these types. Such personalities will always be born no matter what methods may be employed for the control of parentage and society will have to bear part of the burden of protecting them from adverse influences. A man does not inherit insanity as he does a heirloom. He may be born with an incapacity for development beyond a certain grade when he will be feeble-minded. Or he may be born with varying degrees of incapacity for adjustment to the requirements of harmony in his own nature or for social adjustment, when under stress he may become insane. Such variations are bound to occur and society, that is, each and all of us, will have to learn to adjust itself to the inevitable need of the individual, and not proceed on the assumption that all the responsibility for adjustment rests with the individual who is damaged in the contact. Frequently those persons present characteristics which indicate the form of mental disorder to which they are especially liable, and some of the conditions which are most likely to prove upsetting to them are pretty well understood. This knowledge can be applied to prevention. It can not, perhaps, as yet be formulated so clearly and definitely as to be made useful to the general public, but it should be made available to physicians, psychologists, teachers, intelligent parents and others by whom it can be applied with advantage with a view to the prevention of not only insanity but of various nervous disorders and aberrations of thought and conduct which are produced in the same ways as insanity.

One of the greatest obstacles to be overcome in the prevention as well as the treatment of insanity is the dense ignorance in regard to the subject which is so generally

prevalent. Coupled with this is the persistence of beliefs and practices which are mediaeval and contrary to the knowledge and best practice of the present day—though they are accepted or tolerated with the utmost indifference. To spread abroad accurate and useful knowledge in regard to the real nature of insanity, and to the means that are available for dealing with it must therefore have an important part in the plan of prevention. This must be made to replace the prevailing erroneous views and the sensational and inaccurate information frequently conveyed through the newspapers and vaudeville stage or the moving picture shows. A serious difficulty is the extent to which the subject of mental disorders is neglected in the already crowded curricula of the medical and nursing schools. The provision made is quite inadequate, and even post-graduate instruction is not easy to obtain even if physicians and nurses feel the need of it, which is seldom the case. The consequence is that the plainest indications of mental disorder are frequently overlooked or neglected by physicians and nurses, and the advice given and followed may be useless or even detrimental. The responsibility for this is scarcely realized by the public or the medical profession, as not a sufficient number of people know enough to discriminate. Scarcely any more useful contribution to the prevention of insanity could be made than the establishment of better means for the instruction of physicians and nurses in regard to it. The Phipps Clinic recently added to the resources of the Johns Hopkins Medical School is an example of what should be found at every medical school.

Inseparably linked with the problem of prevention is the whole problem of dealing with insanity and the insane. Good treatment of the insane and of those threatened with insanity contribute to prevention. This is especially a social problem because of the extent to which the means of dealing with it have been organized and controlled by the State. The need of detention led to the establishment of asylums before the scientific psychiatry of the present day existed, just as epidemics occasioned the necessity of pest-houses before the causes and means of prevention of in-

fectious diseases were known. This explains, in a measure at least, the fact that less than five per cent of the insane under institutional treatment in New York State are in private institutions or in institutions established or supported by private benevolence. The rest are in the State hospitals. This is in marked contrast to what one observes concerning the provision made for all other classes of ill persons. The original purpose of the State hospitals, which were at first named asylums, was detention and humane care, and to a considerable extent this has controlled the lines on which they have been developed. Steady progress has indeed been made in remedial features, and the State hospitals are worthy of the greatest confidence and support. They are, however, greatly limited by the pressing necessity of providing for mere numbers. They have grown to enormous dimensions and are often at a long distance from much of the population of the district in which they furnish the only proper means for the treatment of a case of mental disorder. It can now be plainly seen that a much more elaborate system than that now provided by the State, excellent though it is, must be built up before the problem of insanity as now understood, can be adequately dealt with. It will be necessary to discriminate more carefully among the many types of conditions met with in the insane and among the diversity of treatments required. More means must be provided for promptly dealing with the patients and with the problems they present, in closer proximity to where they live and work. More skilled workers and more centers of activity for the study and treatment of mental disorders are needed. It is not enough that there are immense institutions to which patients who are insane enough to permit of certification can be taken for a period of detention and treatment and then discharged perhaps to be exposed to the same conditions as caused the original breakdown. Special wards and special physicians and nurses should be a feature of the general hospital also, so that every grade of mental disorder among the patients cared for there might be properly dealt with and so that no insane and often gravely ill persons should be obliged, as

is so often the case now, to receive his first care in the cell of a jail or lockup. Special hospitals for the admission and active treatment of certain types of mental cases and for research in the problems of mental disorders should also be part of the hospital provision in every large city. These might be provided by the State as in Massachusetts, or by private philanthropy in the form of psychiatric clinics connected with medical schools or of independent institutions. Sanatoria and special institutions for dealing more adequately with types of mental disorder in which insanity can not be certified to, or in which special forms of training are required, are also much needed. The establishment of these would be a real preventive measure and should appeal strongly to philanthropy by which this important field of usefulness has been strangely neglected.

The problem of insanity must also be dealt with as something much broader than one merely of institutional provision. The official methods of dealing with insane persons who are not in institutions should be improved. The responsibilities of the medical officers of health in regard to such persons should be more clearly defined, and in the cities, specially qualified physicians should be employed by the health department for this particular work. Out-patient departments where persons suffering from mental disorders should receive skilled advice and treatment, should be a feature of the State hospital system, and of the dispensary provision of the cities. The social service methods which have been introduced in dealing with sickness generally should be extended to those threatened with or recovering from mental disorders. A beginning in this has been made by the State Charities' Aid Association and by the State, but the provision is still quite inadequate. The work that has been done thus far is quite encouraging, and there is surely no class of sick persons who are more in need of aid in procuring such physical and mental adjustments as will enable them to escape or avoid upsetting difficulties. The insane constitute by far the largest class of sick persons under institutional care and many in various stages of distinct mental disorders are at large. They should not be

lost sight of in the liberal provision which is now being made for convalescents and those threatened with illness. More adequate provision for the mental examination and for the proper treatment of abnormal children would also be a real preventive measure.

The laws relating to the insane and the methods of the courts in dealing with insanity are usually a fairly accurate index of the prevailing intelligence in regard to the subject, and of the standards of treatment given insane persons. In this State the laws and methods are in most particulars as satisfactory as any in the country, but the possibility of improvements can be plainly seen. The detention of an insane person should be made a question to be determined in most instances by medical administrative officers or commissions employed by the State, rather than by legal procedures in the courts which have been framed for dealing with crime and property disputes. Ample provision for an appeal to the courts and for official supervision of detention could still be a feature of the system, to be used when needed or desired. What serves a useful purpose for a few is, however, now applied without discrimination to the many, to whom and to whose relatives and friends it simply adds to the horrors of the affliction.

The problem of insanity is, after all, many problems. Every advance in sanitation and the control of infectious diseases, in housing, in industrial conditions, and in elevating people's interests and the tone of life generally contributes to its solution. The apparent increase of insanity with the progress of civilization is occasioned by the rapid development of institutional care of the insane, and by the extent to which people have moved from the country into the cities. It is temporary only and there is no remedy from whatever influence civilization may have except more knowledge of the subject and more general and efficient application of what is now known.

Several quite definite lines along which an organized effort for the prevention of insanity may be made with some hope of success may now be discerned, and the task has been taken up in this State by the Mental Hygiene

Committee of the State Charities' Aid Association. The National Committee for Mental Hygiene has also its headquarters in New York City. The objects aimed at are the prevention of insanity and the better treatment of those in danger of becoming insane or already ill. Insanity is, however, only a pronounced and serious manifestation of disease processes and difficulties in adaptation which are constantly operating in the causation of diseases generally. These have also much to do with the prevalence of various nervous conditions which are not looked upon as disease but which cause much discomfort and reduction in efficiency, of defects in character and of difficulties in sound thinking and acting. These can be best understood and controlled by means of what has been learned in the study of insanity, so in spreading abroad and seeking to apply this knowledge it does not seem extravagant to hope that a real contribution may be made not only directly to the prevention of insanity but also to the prevention of much unhappiness and inefficiency, the causes of which are now not understood, and for which no remedy is known.

REPORT OF THE INTER-HOSPITAL CONFERENCE
OF PHYSICIANS AT ST. LAWRENCE STATE
HOSPITAL, OGDENSBURG, N. Y.,
OCTOBER 25 AND 26, 1911.

Present—

- Dr. AUGUST HOCH, Dr. CHARLES B. DUNLAP and Dr. CHARLES I. LAMBERT, of the Psychiatric Institute.
Dr. GEORGE W. GORRILL, Buffalo State Hospital.
Dr. WALTER G. RYON, Willard State Hospital.
Dr. RAYMOND F. C. KIEB, Dannemora State Hospital.
Dr. ROSS MCC. CHAPMAN, Binghamton State Hospital.
Dr. WILLIAM J. TIFFANY, Binghamton State Hospital.
Dr. W. H. MONTGOMERY, Willard State Hospital.
Dr. CARL VON A. SCHNEIDER and Dr. ANNE E. PERKINS, Gowanda State Hospital.
Dr. J. ALBERT PRITCHARD, Willard State Hospital.
Dr. IRVING L. WALKER and Dr. WILLIAM H. VEEDER, Rochester State Hospital.
Dr. WILLIAM W. WRIGHT and Dr. FRANCIS J. LENNON, Buffalo State Hospital.
Dr. MARY A. NICKERSON, Rochester State Hospital.
Drs. R. H. HUTCHINGS, PAUL G. TADDIKEN, ROBERT KING, AARON T. COLNOR, CHESTER WATERMAN, ARTHUR G. LANE, CAROLINE PEASE, ALICE BAXTER, H. CLIFFORD MONTGOMERY and Miss JOSEPHINE A. CALLAHAN, Superintendent of Nurses of St. Lawrence State Hospital.

Dr. PAUL G. TADDIKEN read a paper on "**A Discussion of Paranoic Conditions, with Special Reference to the Mental Deterioration,**" prepared by himself and Dr. LANE. (Printed in full in the BULLETIN, Vol. V, pp. 63-77).

By way of introduction, Dr. Taddiken said that it was the purpose of the hospital staff at this meeting to present several topics dealing with the problem of paranoic conditions, namely, aside from those with which his and Dr. Lane's paper dealt, the paranoic states which occurred in manic-depressive insanity, and those in constitutional inferiority.

After the reading of Dr. Taddiken's paper, the four cases dealt with were presented to the conference.

Dr. RYON: I have had occasion to study Case 3, and I have always had the idea that she would go on to a deterioration process. Her delusions are not systematized as those of Case 1, for example, but are rather loosely put together, and it does not seem that a person of her

intelligence should have such absurd ideas, and although she works efficiently in the hospital she reacts very little to her hallucinations except in a complaining way. I would also call attention to the fact that her ideas of electricity are very similar to those of Case 4, and that sexual ideas exist in both. Case 4 has deteriorated more markedly but I think Case 3 will also progress to further deterioration.

Dr. GORRILL: I think that Case 1 is quite clear. In regard to Case 3, I agree with Dr. Ryon. Many of her ideas are quite absurd and she has made no attempt at reasoning them out. These points seem to me to speak for a certain degree of deterioration.

Dr. SCHNEIDER: I think that even in Case 2 the reaction to the hallucinations is inadequate.

Dr. PEASE: I am also of the opinion that Case 3 is likely to deteriorate, and I feel so now more than ever. I may add that on one occasion when she talked to me she lost her temper. At that time she became quite incoherent and expressed very foolish ideas. Case 4 is plainly deteriorated. She takes less good care of herself and has become quite slovenly. Her facial expression has changed, and her ideas have become very absurd and her interest generally deteriorated.

Dr. BAXTER: I think that Case 3 will deteriorate. I might say that the ideas of electricity have developed only in her second admission here.

Dr. LANE: In Case 4, the mannerisms, the carelessness in appearance, and the absurdity of her reasoning certainly speak for deterioration.

Dr. TADDIKEN: In answer to Dr. Schneider, I would say that in Case 2, we can not definitely judge from observations made here of the patient, as she has a desire to minimize her ideas with a view of obtaining her release. I believe that if she were free she would still claim that she is the daughter of wealthy people and had money left to her, and that all this was a scheme to blacken her character in case she brought the matter into court. In Case 3 we find a very decided reaction to her delusions. She gets embittered and angry, or cries and asks to have the matter stopped. I do not think, therefore, that the patient can now be considered deteriorated, for the reasons which I have indicated in my paper; and the lack of systematization certainly does not mean this. However, we can not deny the possibility that she may deteriorate later. I would like to add that this discussion is exactly along the line which we wish to bring out, namely, a discussion as to what are the symptoms which allow us to speak of deterioration.

Dr. HOCH: To a certain extent the old discussion as to whether the absurdity of delusions argues for deterioration or not, is here again revived. In this connection it is well to remember the absurdity of some ideas which some normal people hold when affects come into play. However, it must be admitted that such absurd ideas exist chiefly in realms in which the chances for correction are not easily

at hand, that is, in questions of belief, or faith. Only last night I read an article on Yoga religion in which comment was made on the startling absurdity with which some American women went off on a tangent, seeking eternal youth promised by priests of the East. I think that some of you would have to say that they were deteriorated, yet they are probably women well adapted, in many ways, to the practical issues of life. However, to a certain extent, the absurdity undoubtedly may be taken as a guide. But more important seems to me to be the general attitude of the patient. In this respect Cases 1 and 2 do not offer any real difficulties, while Case 3 is evidently the stumbling block. It has been said that the reaction to her delusions and hallucinations is inadequate, but as Dr. Taddiken has stated she sometimes vigorously opposes what seem to her to be persecutions, but there is no attempt at explanation or at systematization. Of course systematization points to a very natural attitude, to a particularly well preserved cohesion of the conscious personality, if I may use this term which I, perhaps unwisely, coined some time ago. However, what I meant was this. It seemed important to ask whether or not the patient makes any attempt to harmonize the intrusions from the subconscious (for as such we must regard the delusions and hallucinations) with his logical thinking, his experience, and the facts of the world about. Patients with phobias or compulsive ideas do this by recognizing the morbid nature of the phenomena and thus excluding these facts logically from the rest of their personality; a patient who systematizes tries to explain them by a logical elaboration, *i. e.*, he makes them emphatically a part of his personality and his real experience. On the other hand cases with dementia præcox or, to put it more generally, cases who show signs of deterioration do not rationalize these ideas at all, they go around them, one might almost say, without taking any notice of them. It is for this reason that I have spoken of ideas which are like foreign bodies in the mind. Now in Case 3 we can not say that this is the case. The patient takes a certain, rather definite attitude towards her experience, very much as we might towards phenomena which we do not quite understand. Her attitude is very much as if she would say "this is all very disagreeable and quite wrong but I do not know what it means." Therefore systematizing is only one way of taking a rather natural attitude towards delusions. Then, as Dr. Taddiken says, she is interested in her environment. And there is in this connection another point which should be mentioned. We should always analyze our own attitude towards a patient, and in this way we can gauge to quite an extent the patient's affective responsiveness. Towards personalities like Cases 1 and 2, but also towards Case 3, we have an entirely different feeling than towards Case 4. In the first three we naturally fall into a manner which is not much different from that which we would show towards an ordinary person whom we had to advise, *i. e.*, we are inclined to observe certain social forms of politeness, meet them half

way, etc. In Case 4, on the other hand, we do not feel spontaneously inclined to such an attitude, because we instinctively perceive the barrier between her and us. The lack of response in her produces a certain lack of response in us, because she lives much more in a world of her own. Finally the scattering of the train of thought is an important feature, but this is merely a part of the general disorder which we have spoken of as a lack of cohesion of the conscious personality. Case 3 as Dr. Pease tells us, shows this episodically, but at present her ideas are brought out quite coherently. I take it that all these points, *i. e.*, the attitude towards the delusions and hallucinations, the attitude towards the outside world, the incoherence, and, we might add, the consistency and unity of the affects, are the outcome of a general disorder which is difficult to define but which consists in an interference with the unity and adaptation of the personality. I should therefore agree with Dr. Taddiken that Case 3 shows no definite evidence of deterioration, though, as he says, she is not so much on the safe side in this respect as Case 1, for example. But what Dr. Taddiken wished to bring out, if I understand him correctly, is not so much the question of a specific case as the principles upon which the existence of deterioration in this type of cases should be based. It is difficult to say whether a delusion is more or less absurd, whereas the points which we have mentioned can be more readily gauged. They refer, moreover, to a sizing up of the whole personality. I also agree with Dr. Taddiken that there is no line of demarcation between paranoia and dementia præcox, but we know that some cases deteriorate and others not. The question of deterioration, however, in these cases involves different principles than it does in the organic reactions.

Dr. CHESTER WATERMAN read a paper on "**A Consideration of Paranoid Ideas in Manic-Depressive Psychosis.**" (Printed in full in the BULLETIN, Vol. V, pp. 78-86.)

Discussion of Dr. Waterman's paper:

Dr. RYON: I have repeatedly seen paranoid ideas in cases of manic-depressive insanity. Sometimes ideas of infidelity, with seeking divorce, or separation, from husband; and fleeting delusions of persecution may develop, and the patients also will, infrequently, misinterpret things done for their care.

Dr. HUTCHINGS: My experience with these cases has been very similar to what Dr. Ryon has referred to in that they are to be explained on misinterpretation of actual events. That is one of the characteristics of manic-depressive cases. They mistake what they see, misunderstand what is said to them, and mistake the identity of people about them, and it seems to me that this paranoid elaboration is often on that basis. It seems to me that possibly, the outlook in such cases is not always good. I have in mind some of our old chronic cases, which have shown this attitude, particularly one woman

who has been here for about twenty years, and who is extremely distractible, both to things seen and words spoken, and generally comes up to me when I am on the ward to make a complaint that they have stolen her clothes, or done something to annoy her. She has a suspicious trend not greatly elaborated, but suggestive of a paranoid condition, but she is so distractible that one can easily switch her off on to some other subject that she will forget her complaint. We have several cases here of that type, who are patients belonging to manic-depressive group and who failed to fully recover.

Dr. TADDIKEN: I would like to ask about the last case Dr. Waterman mentioned. In studying the case myself, I concluded he was a recoverable paranoia. It is not quite clear to my mind as to what way he differs from that type.

Dr. WATERMAN: My reason for regarding the last case as belonging to the manic-depressive group, was mainly the type of the emotional reaction, which was such as is found in this psychosis. In the first attack he had depression. He emerged from that with great activity, and is said to have been a great joker. In the depressed phases he spoke, quite prominently, of a feeling of inadequacy and of his head feeling muddled, and that it would take him a whole day to do a half day's work, etc.

Dr. HOCH: In regard to Dr. Taddiken's question about the last case I agree with Dr. Waterman. In the earlier attacks the description is not so full, but in the later attacks the subjective feelings of inadequacy, etc., are more prominent. He said his head was muddled, that he had a band around his head, that it takes him a whole day to do a half day's work, and things of that sort, which after all points strongly to a manic-depressive condition, especially when we consider the whole course. The point which Dr. Waterman makes that in manic-depressive cases sometimes a feeling of suspicion arises, on a concrete situation which then colors the entire manic-depressive picture agrees with my experience. I remember the case of a bank clerk in whose bank a defalcation occurred. He began to feel uneasy about it and throughout the attack which had manic-depressive features, a marked suspiciousness and delusions persisted. Sometimes we find a peculiar mixture as in a case in the Institute now, a woman who had for a half year a paranoid state and then developed a mixed manic condition.

It would be worth while, in a further study, to take up, in addition to such typical cases such as Dr. Waterman has presented also cases in which the situation is more doubtful. This may bring out additional points which would be still more interesting and instructive.

Dr. WATERMAN: The cases I have looked up were manic-depressive cases showing definite manic traits. Gierlich has cited three cases without any manic traits and with recurrent paranoid attacks and absolute recovery between them, and he also cited some cases that were on an inferior basis, at least the individuals were

commonly termed neurasthenic and psychasthenic and a great many features would suggest that. In such cases it would be interesting to know if there was an actual occurrence that caused the upset. In one of Gierlich's instances this was evidently the case.

Dr. HOCH: It would be interesting in this connection to hear of other acute paranoic upsets, not associated with manic-depressive signs.

Dr. R. M. CHAPMAN: I recall a case with a paranoic trend from which the man has almost entirely recovered. The patient was 38 years old and had rather an interesting family history. His grandparents on both sides and his father and mother were insane, a maternal aunt was insane and during the past two years his two sisters have also become mentally unbalanced. As a child and youth he was apparently normal, had many friends, was popular but extremely sensitive, always inclined to be a little emotional. When 20 years of age he married.

The onset of his psychosis dates from about three years ago. He is a mechanic and was engaged at that time in assembling electric hoists. He gradually developed the idea that his tools were being stolen or misplaced by his fellow workmen, then that work was not given him fast enough. He came to believe that his associates were leagued against him and that an effort was being made to get rid of him. These ideas developed until in the course of a year he had very active persecutory delusions directed against members of the firm for which he worked as well as against his family physician and his wife. A year after his psychosis began he lost his house, one of his horses died and he had other ill-luck. Following this he developed a mild anxious depression with a fear that he might do some harm. He was afraid, for instance, that in assembling his hoists he might make a mistake and later they might break and injure some one. He developed the fear that the laundry workers in the hospital might become diseased from a dust cloth that he had been using to dust off the ward furniture. It is interesting to note that while he is still slightly suspicious, he has almost entirely recovered since his admission from his persecutory ideas.

Dr. WRIGHT: We had a case showing a great deal of apprehension. She was deluded and hallucinated, had ideas of poisoning—took but little food—thought she was being accused of her misdeeds, was told that she had Indian blood. She had a vision—over the river Jordan was a bridge with a broken span; at the opposite end, reaching out for her, was her aunt at whose house she lived when she had an abortion performed.

Into her delusions she wove a lot of Indian legends learned in youth. She gave a very good retrospective account of her attack, explained the origin of her ideas and had excellent insight into her condition. She seemed perfectly clear.

Ten days ago she went home. Her employer tells me that he has

observed nothing abnormal in her manner and that he considers her as well as ever.

Dr. HOCH: What struck me about Gierlich's cases, was the fact that all of them showed a good deal of affect. They were rather anxious and throughout the psychosis that affect existed and the psychosis disappeared with the cessation of the affect. Recently Bertschinger reported a case of an acute paranoic condition, with delusions of persecution, hallucinations, considerable anxiety and suspiciousness. This case recovered after a psychoanalysis had been made. Many years ago, I saw a case of a young man, by no means inferior, but a successful employee in a big business. He had two attacks under my observation, and one since then. They were characterized by marked ideas of persecution and hallucinations; but were associated with anxiety. In both attacks he had jaundice. In the first attack the jaundice came first and then the psychosis; in the second the psychosis came first. (Evidently, there was therefore some connection between the affection of his gastro-intestinal tract and his psychosis.) There are, therefore, acute paranoic conditions which go hand in hand with considerable affect of fear. To say they are manic-depressive insanity would preclude a more careful sifting and it is very much wiser not to put them into a large group but keep them separate as something special. I do not think with Specht that paranoia is essentially manic-depressive insanity, for I do not see that anything is gained by this even if a relation were evident.

Dr. GORRILL: Last year a woman, aged 51, came to the hospital. Her husband deserted her, and almost immediately afterwards she developed ideas that he was about the house and people were keeping him from coming in. She also developed hallucinations of sight and hearing; sometimes she saw him outside or heard people talking about him being in town and about her being immoral, etc. She became so obnoxious to the minister of her church, who, she finally got the idea, was in love with her (was married and had children) that it was necessary to commit her. She remained in the hospital about nine months, and retained these ideas. At the end of this time she was served with a paper stating that her husband was in another State and was suing for a divorce on the ground that she had deserted him, which was opposite to the truth. We arranged to have her fight this bill of divorce, which she was at first unwilling to do, and the minute I talked with her about her husband's suing for a divorce in another State, instead of being around and locked up, etc., she began to realize that he was in the West and that these ideas were possibly and quite likely imaginary, or must have been, and within a few days she seemed quite clear on all matters. While I have not seen her since she left, her sister, who is a very intelligent woman, writes to us regularly, and informs us that she is perfectly well and has been in the West seven months; that as soon as she reached the West she gave up these ideas and fought this suit, receiving alimony of \$1,000.

When she came in I put her down as paranoia existing about a year or more, and she remained in the hospital a year with the same ideas of persecution, also ideas that she had great power, etc., but was not active, and there was no evidence of a depression.

Dr. A. T. COLNON read a paper entitled "Paranoid Conditions in Constitutionally Inferior Individuals."

Discussion of Dr. Colnon's paper:

Dr. GORRILL: I had a case twice under observation who was also in another institution. He was undoubtedly intellectually inferior and so recognized in very early life. He has had three attacks characterized by ideas of persecution, and in the first and last attacks, particularly the last, hallucinations; he had ideas people were following him and were going to injure him. He became quite excited and desperately suicidal in the third. Each attack lasted about two months, and he made very quick recovery with good insight. He was put down as constitutionally inferior with episode of acute hallucinations. Another similar case came in this spring, who was undoubtedly an imbecile. Two months before he was admitted to the hospital he suddenly developed hallucinations and fear and ideas people were going to kill him; he jumped out of the window and ran away. No alcohol in either one of these cases. This case was free from his delusions and hallucinations within ten days after his admission to the hospital. He has been home for four months and has been well since. One was decidedly inferior and the other was a real imbecile, hardly able to look after himself. He was under close observation of his people all his life and could do only a little rough work about the farm.

Dr. SCHNEIDER: I recall one case of a constitutionally inferior, who is at present in the hospital in his fourth attack. The present attack was preceded by alcoholic excesses, but not the other three. He came in six months ago, and was evidently perfectly recovered in three months, but as he had no home to go to remained in the hospital, and about a week ago he developed paranoid ideas and hallucinations. He recovered fully before, excepting that when he went home he was incapable of doing any continued work, changing his business frequently, but as far as the family could see he was in his normal condition.

Dr. HOCH: I think it would be interesting if Dr. Kieb told us about his experience with paranoic conditions in Dannemora.

Dr. KIEB: Most of our cases show a paranoic makeup and a large percentage of them are grafted on an inferior basis. At times it is very difficult to establish this as the friends and relatives will not co-operate and the patients themselves co-operate very poorly. Nearly all of them show the morphological stigmata of degeneration. Most of these cases are observed on admission from the reformatories. They are young boys who get along fairly well until they commit

crime and for which they have to be sent to the reformatory. They are unable to cope with reformatory discipline, become depressed and develop a vague paranoid trend. More pronounced cases show elation, excitement and active delusions and transitory hallucinations. As soon as they are transferred to the hospital and the situation is explained to them they gradually clear up and appreciate that their ideas were all unfounded. In many instances the active symptoms have subsided and the patient styles his transfer as a "frame up" on the part of the reformatory officials. They show an indefinite paranoid trend and in addition to this defective moral sense, weakness of will power, inability to apply themselves and defective reasoning power and judgment. We classify these cases as "paranoid conditions," and in the hospital we usually style it as the "Elmira Psychosis," because nearly all the cases of this type show the same characteristics. In these cases, there is no deterioration and improvement is noted under treatment. We also have a large class of cases of dementia præcox of the paranoid type and a number of cases of Kraepelinian paranoia.

Dr. GORRILL: We have had a great number of cases which I considered to be constitutionally inferior, and we are so situated that we can get more information than in country institutions, as patients come from the city and have plenty of visitors. In these constitutionally inferior people, we find some very peculiar psychoses. They do not seem to fit into any typical group. Thus we have some cases of depression, which do not seem to be manic-depressive, and we have other conditions in which there is a paranoid trend.

I was thinking of one case that has come to the institution twice—a man quite inferior, who has worked as farm laborer for one man for several years, and finally (he can not explain why he did it) made an improper proposal to the wife of his employer, who had been a mother to him. She slapped his face, and he immediately began to worry on account of what he had done and realized he had done something rash and did not know why he did it. He went through quite a marked depression, was suicidal, was no more use in the world because he had made the proposal to the woman, who had been so good to him for years. There was no retardation; he talked briskly, and the only evidence of a manic-depressive trait was the fact that he felt inefficient and could not do his work, either mental or physical. Otherwise, there were no traits or symptoms, except quite a severe depression, which disappeared rather promptly after the case had been thoroughly discussed and the man for whom he worked visited him and looked upon his behavior as an abnormal act of a child. He got well and went back to the same place and worked six months, when he again began to worry; he said that when he saw the woman he thought of what he had done and could not help worrying about it; he asked to be brought to the hospital, saying he was going into another attack of depression like he did before, and the next day it

was quite necessary to return him, as he was about to attempt suicide. He has passed through another attack of depression of similar nature, lasting two months, has left the hospital, and seems to be quite well. He has obtained another place of employment. It is far from being typical of a manic-depressive psychosis, yet it is a second attack of depression in a person constitutionally inferior.

Dr. HOCH: The statement that a psychosis develops on an inferior basis is often a matter of inference. It will be quite important to study this question further as a part of the general study of relation of makeup to the type of psychosis. When we speak of constitutional inferiority we should however be clear what we mean, *i. e.*, whether we mean defects like imbecility, or defects of adaptation with good intelligence, or combinations. Among those with defects of adaptation we have certain types, some of which, such as the hysterical or manic-depressive or dementia præcox types we know to a certain extent—others need further characterization, although this is a difficult task. But in using the term we should feel the obligation to demonstrate the existence of some real defects of makeup and to make an attempt at least at characterizing this defect.

Dr. HUTCHINGS read a paper entitled "**A Demonstration of Work Done by Patients in Kindergarten.**" (Published in full in the BULLETIN, May, 1912, pp. 3-12.)

Discussion of Dr. Hutchings' paper:

Dr. PRITCHARD: I recall the case of a girl who at first was on a very good ward, but became assaulting, filthy, and later was transferred to another ward. About that time, the medical magazines and newspapers contained articles about the thyroid operation in dementia præcox cases. Her mother took her to another city for the purpose of having this operation performed. It is not quite clear just what was done for her. After she came back to the hospital there was absolutely no change for some time. Following that she was taken into the calisthenic class and at first was disinterested, but gradually improved so that she was no longer assaulting to her friends when they came to see her, spoke some and was more interested and did some work in the basket shop. The mother attributed the improvement to the operation; others attributed it to the change which may occur in dementia præcox cases without any treatment, and others still to the calisthenic class.

Dr. GORRILL: We have a calisthenic class in which we admit mostly dementia præcox cases, who have become untidy and deteriorated. I do not think we have taken in cases as deteriorated as those Dr. Hutchings has put in his class, and I fear we are somewhat behind in this form of treatment. Some patients we send into the class are very untidy, but are not the kind that are really violent and assaultive. I am in a receptive mood as far as information is concerned, and I

would like to ask Dr. Hutchings the number of patients he has in his calisthenic class and whether he has one trained teacher and if she is assisted by nurses.

Dr. HUTCHINGS: Our calisthenic class varies from day to day, but it has averaged between 40 and 52. There is only one teacher, but she is assisted by quite a number of nurses, eight or ten. Some special patients who need lots of attention have a nurse for each patient, and others are helped by other patients, and brighter patients will help the backward ones. With resistive patients sometimes two nurses are employed to keep them marching and in place.

Dr. PERKINS: In regard to the industrial work done at Gowanda, I am sorry to say that we have as yet made only a small beginning, but this is not from lack of interest in the work. It is evident that individual attention is highly necessary, as Dr. Hutchings has shown, and we have no one who has been trained in the industries and calisthenics. We hope to have some definite arrangements soon. We have begun to do a little basket making, but depend on books and ingenious nurses and patients who have done some creditable work. I have tried to accomplish something in the teaching of calisthenics to dementia præcox cases that are unemployed. We hold these exercises in a large pavilion in the woods, built especially for the entertainment of these patients. It has been difficult, as I have had no one to give me special assistance, and too often those attendants who become competent, leave the hospital, and nurses attend class twice a week. The great disproportion of patients and attendants, with the necessity of giving attention to those not taking part has been another disadvantage. In spite of this we have made considerable progress. We have no music teacher at all. The attendants and nurses are likely to be easily discouraged and drop their efforts. I hope we shall soon have some one especially to take charge of this important branch.

Dr. NICKERSON: It has been my experience with these cases that the older ones who are more deteriorated are much easier to get hold of. The younger cases are so full of delusions and are so active that it is more difficult to get their attention than is the case in the deteriorated cases. At Rochester we start the new patients with calisthenics, and later get them to do sewing and other lines of work. This is working very well.

Dr. TADDIKEN: At Flatbush we had several classes. There was one special class in charge of special attendants and the work was considered part of the training school work. Every nurse in the training class was given a month's instruction in that class, and she was supposed to master the brass work, raffia, general fancy work, etc., and also general kindergarten work, making scrap books, etc. The nurses would then instruct on the different wards, and we had an occupation class on each ward. We would start in with patients on the more disturbed wards and as they showed interest and improve-

ment transfer them to the more advanced classes on the better wards. We were very much handicapped by not having sufficient help to devote attention to the work, again we would have a class of 12 or 14 people and would not be able to do anything with that class until after the morning's work was completed. We found the better class of patients would interest themselves in one individual and assist the nurse in charge very materially by instructing this individual case, and much was accomplished in that way.

In reference to the scrap book work we found that if the patients had some definite object in view they would work a great deal better and they started to work by cutting pictures out of magazines and preparing them for the children's hospital for Christmas. Patients, who had children at home, were induced to make something for their own children. We also added interest by having afternoon tea. The calisthenic class was more for the better class of patients, but it was noticed in the summer time when the calisthenic class was held out of doors a good many patients, not in the class, showed interest and were subsequently added. We had 65 patients who were going through quite complicated physical culture exercises. Our success was due largely to the fact that we had a very competent woman to give the instruction.

Dr. HUTCHINGS: I think, perhaps, I did not make clear why it was, when we began to teach patients something definite in the class, that we adopted kindergarten work. That was for two reasons. One was to find the work that was easiest to do. The other was to have them work with attractive material, which would serve to attract the eye of dull and stupid patients. We have used our calisthenic class as a preparatory class. We have watched the patients there and tried to decide whether they were suitable to advance further or not. Not all of the calisthenic patients have been taken into kindergarten because they were too old. We found that after 45 it was almost impossible to teach patients anything along these lines and we have not attempted to teach any, except the younger class at the present time. We may, in time, find something that will appeal to the older patients and be able to do something for them. As for teachers I think it would be a very reasonable request to ask for a special attendant to teach this work. I have never been refused by the Commission for anything in this work and it has been interested and has co-operated in every way. We have, at the present time, a teacher of kindergarten work and a teacher of music, who spends her time going about the wards getting the patients to sing and invites everyone to come to the piano and the nurses urge those who are backward to join in and they sing "The Old Gray Bonnet" and all the popular airs, and it has been very successful. I am much pleased with the work of the music teacher. We have another special teacher, who makes rugs and work more like the Sloyd work, and the person, who has charge of the calisthenic class is one of the supervisors. So there are

four people who are giving almost all their time to improve the condition of dull and demented patients.

Dr. Nickerson's experience coincides with mine, that there is very often in catatonic patients so much upset and rigidity and negativism that it is almost impossible to do anything with them. They get excited. There is nothing so far as I know that will reach that class until they quiet down and become less active. But with the hebephrenic class we can do something at the beginning. It is a common remark at the staff meetings that this patient should be given something to do to prevent deterioration of interest and habits.

The kindergarten is held every day but one in the week for two hours. The calisthenic class three times a week. The Sloyd every day and all days. I think it would be unfair to ask a teacher of kindergarten methods to devote more than two or three hours a day to this work as it is very nerve racking, and if we had two classes a day I think we ought to have two teachers. We have never had any difficulty with scissors. In the whole two and a half years' work there have only been made three assaults by patients in the class.

Dr. KING read a paper entitled "**Paresis and Syphilis.**" (Published in the BULLETIN, May, 1912, pp. 87-102.)

Discussion of Dr. King's paper:

Dr. DUNLAP said that he shared Dr. King's humility as to making any accurate diagnosis on clinical grounds alone in those atypical cases of general paralysis, where the question arose as to whether one was dealing with that process or with a late case of cerebral syphilis. In most cases the diagnosis of general paralysis or cerebral syphilis could be made with a good deal of precision, surely as much if not more than was possible in other diseases of the nervous system or of the general system, but in the borderland cases where general paralysis and cerebral syphilitic disorders closely approached each other it was not only difficult clinically but difficult anatomically at times to make a clear separation. In general paralysis of long duration especially, anatomical changes often had to be hunted for carefully; in such cases of general paralysis there was little in the pia and the vessel sheaths of the cortex might show extremely little infiltrate. In cases of cerebral syphilis on the other hand, with a slight exudate in the meninges, one occasionally might find a few lymphoid cells and possibly a plasma cell or so in the vascular sheaths of the cortex, so that the two processes closely resembled each other. It was generally true, however, that whatever was found in the cortex of cerebral syphilis might be pretty definitely shown to be an extension of the process from the pia inward, but such extension was not always possible to demonstrate. In the medulla oblongata and sometimes in the spinal cord there was very little difference between the ordinary case of general paralysis and the ordinary case of late cerebral syph-

ilis so-called. In the medulla oblongata of general paralysis both the pia and the substance of the medulla contained infiltrate and granulations were seldom absent in the ventricle. In the medulla of the syphilitic case infiltrate was usually distributed in the same way though it might be more massive in the pia, and granulations in the ventricle were more often absent, but the essential differences between the two were very slight. Therefore, anatomically we found cases where it was hard to say which process was before us. Usually collateral evidence in the blood vessels, such as syphilitic endarteritis, helped out, but in cases of unquestioned general paralysis one might find perfectly typical endarteritis although it was not very common. Consequently, we might come to a place where the two usually plainly distinct processes came so closely together that no one could be too positive about which was actually present, and the question arose as to whether it was worth while to try to be very positive in such cases about the exact label. It was in the late syphilitic cases that the diagnosis came most into doubt. In the early syphilitic cases where there was reason to believe that the spirochete might be still active the diagnosis, both clinically and anatomically, was usually clear. We do not know what agent it is that produces general paralysis. We speak of that agent, however, as a metasyphilitic virus which produces a certain effect on the tissues, and we look upon the exudate as one of the visible signs of that effect. This exudate, found abundantly in the pia and the cortex of ordinary general paralysis, is found hardly at all in the cortex of cerebral syphilis, although in the pia it may be abundant or slight, but in the brain stem and medulla oblongata, as already stated, in both general paralysis and syphilis the exudate may have essentially the same appearance and distribution. We can not say that the same metasyphilitic virus produces the exudate in the two cases; on the other hand, we can not say that it is not the same virus, the pia being chiefly affected in the one case (syphilis), and both cortex and pia being affected in the other (general paralysis). About the best we can do is to say that in both cases we are dealing with changes in the tissues in which the causative agent, or virus, for aught we know to the contrary, may be the same in the two cases, on the other hand it may be different, the essential thing being that both processes are dependent on syphilis, and to the best of our present knowledge seem to yield little if at all to any treatment, and as far as we know do not as a whole recover, although certain retrocessive changes may at times be seen. Dr. Dunlap mentioned a case from the Hudson River State Hospital, a painter, in whom the diagnosis of general paralysis had seemed well established during life, but in whom no traces of this process or of cerebral syphilis were found post mortem. As to other diseases resembling general paralysis anatomically, in this country at least, Dr. Dunlap knew of nothing else in human pathology that presented the same anatomical picture; he had examined a case of sleeping sickness received through

Dr. Meyer from Dr. F. W. Mott. The picture was different from general paralysis in the fact that the exudate, although similar in kind, did not remain confined to the vascular sheaths, as in general paralysis, but spread throughout the tissue as well, and was of a more patchy character than the exudate in general paralysis, which, as a rule, was to be found practically everywhere in the regions affected. Dr. Dunlap said that he had had practically no clinical experience with patients, but in the records furnished with post mortem material the picture of general paralysis was usually fairly distinct, just as the anatomical picture was usually distinct, and in many cases of cerebral syphilis the clinical picture was fairly distinct just as the anatomical picture was, so that he would be more optimistic than Dr. King for the reason that he believed that the percentage of cases which could not be diagnosed safely on clinical grounds was small.

Dr. LAMBERT: I do not think we should be too discouraged by certain difficulties in the situation. The clinically clear cases of general paralysis are rarely proved otherwise at autopsy, but certain cases clinically problematical are scarcely less a puzzle anatomically; this is more particularly true with the chronic syphilitic endarteritic-meningitic conditions. Once the past year in the Manhattan State Hospital autopsy service an exudative syphilitic endarteritis and wholly characteristic chronic meningoencephalitis characteristic of general paralysis were found coexistent; it is not infrequent to find quiescent forms of the syphilitic endarteritic process in cases of general paralysis. The study of the exceptional cases is especially interesting and profitable in enlarging our view point of what general paralysis may include. Again it is important to realize that focal lesions, due to a meningoencephalitis rather than endarteritis—six to one in the past year in thirty-one cases of general paralysis—may occur; the focal symptoms arising are comparable to vascular occlusions. The exceptional conditions simulating general paralysis are also very important; among these are the lacunar forms of arteriosclerosis especially those of syphilitic origin in which multiple small focal lesions are found in the white substance of the brain and brain stem. Another interesting condition mistakable for general paralysis are the precocious forms of senile dementia, one of which was reported last night; the anatomical process while wholly different from general paralysis, in its extent and destructiveness of the cortex is similar.

Dr. KING: I took up these cases with a view to treatment. We have such cases coming up in staff meeting all the time. I have one case under treatment now who seems to be improving. The cases I had in my paper were none of them of Dr. Dunlap's late types of cerebral syphilis; they were all of arteriosclerosis.

Dr. CHARLES B. DUNLAP gave a **"Report on Cases of General Paralysis, Cerebral Syphilis, Bulbar Paralysis, Central Neuritis and Chorea,"** which has been sent to the Institute from the St. Lawrence State Hospital.

Dr. DUNLAP stated that the report would include a brief summary of thirteen cases.

The first case, No. 520, M. F., showed characteristic changes of central neuritis in the Betz cells, and presented typical symptoms,—retraction of the head, and constant severe jactitations of the legs and arms. She lived only one day.

The second, a case of chorea, No. 511, A. J., occurred in a farmer of 72 who died sixteen days after admission. He had had choreic movements resembling Huntington's chorea for about a year, but had shown decided mental symptoms only for about two months. The most significant changes found anatomically were fine granular pigment in the pia, nerve cells, and neuroglia. There was in addition arteriosclerosis with softenings in the left and right parietal lobes. It was doubtful whether this was a case of Huntington's chorea as there was no history of a hereditary tendency.

The third case, No. 444, J. H., an epileptic, had a large porencephalic cavity in the left parietal lobe. He had been in the hospital fourteen years, had had frequent convulsions, and seldom spoke. The porencephalic cavity took in the superior parietal lobule, the inferior in part, most of the cuneus and the whole quadrate lobe. The right cerebellar hemisphere was a little smaller than the left, the left pyramid a little smaller than the right. No disorders in the structure of the cortex were found in this case and the gross lesion was considered to be the basis of the epilepsy.

The fourth case, No. 420, W. P., had had infantile paralysis at three, and as a sequel paralysis of both legs and partial paralysis of the arms; he was bright until 18 when progressive deterioration started in with ideas of mesmerism and that women were in love with him. His legs were much atrophied, the knee-jerks were absent, there was marked talipes, the pupils were normal. He died after twelve years of hospital residence of pulmonary tuberculosis. The cerebellum and cord were almost infantile in size and the nerve roots in the lumbar and sacral regions were small and stringy; there were few large nerve cells in the anterior horns of the lumbar region, although above this level they seemed well preserved. There was a diffuse degeneration of nerve fibres in the posterior columns of the lumbar region, but at higher levels in the cord this degeneration became more definitely circumscribed and at C₆ was entirely limited to the columns of Goll, which contained very few normal fibres.

The small number of cells in the anterior horns of the lumbar cord was associated with the poliomyelitis, and the degeneration in the posterior columns, while not so clear, was thought to belong with the same process. In spite of the small size of the cerebellum a fair

number of Purkinje cells was present, but they were smaller and more shrunken than usual. The small size of the cerebellum was not explained, although it was suggested that there may have been little call for its functional activity in a case of infantile paralysis with almost complete lack of use of the lower extremities and partial paralysis of the upper extremities since the age of 3.

The fifth case, No. 629, L. O., was a farmer of 33 with bulbar paralysis, together with atrophy and paralysis of the left arm and hand. The process began in the arm and hand about thirteen months before death, but the bulbar symptoms were less clear in onset. With the first symptoms of paralysis he became irritable, forgetful, wandering in his talk, and had hallucinations concerning bears. Within the year he deteriorated until memory and insight were gone. He could not stick out his tongue, the latter was atrophied and tremulous, and some of the lower face muscles were also atrophied. Difficulty in chewing and swallowing was present, and he had to push his food back in order to swallow; the lower lip hung down. Sensation in the affected parts was preserved to heat, cold, etc. The knee-jerks were increased; the organic reflexes at first were controlled, later lost. He gradually lost ground and died.

Grossly the brain was essentially negative, barring slight atrophy. In the cortex there was considerable activity of the neuroglia both in the first and deepest layers and a good deal of degenerative change as shown by pigment and debris. The small blood vessels were often quite fibrous and thick. In the spinal cord the left anterior horn showed very few large motor cells, especially in the lateral groups. The contrast between the two horns was very striking; no inflammatory changes were found here and the condition looked purely degenerative, as in progressive muscular atrophy. The medulla oblongata had not been carefully examined. Whether the degenerative and vascular changes in the cortex merely co-existed with the profound deterioration, loss of memory, etc., or whether they stood in a causal relation could not be decided.

The next group taken up was general paralysis. The first case in this group, No. 670, F. P., an almost inaccessible Italian of 62, ran through his psychosis in about fourteen months, and was considered senile deterioration. He was unsteady, feeble, arteriosclerotic and had a slight tremor, and a memory defect. There was little clearness in the clinical picture for obvious reasons, but microscopically the changes were clear and the infiltration was well marked. The most noticeable thing was the even spread of the process over the whole convexity. There were many granulations in the fourth ventricle; the large blood vessels were in fair condition.

The second general paralytic, No. 552, C. G., a janitor of 25, was admitted in a suspicious, restless condition, with increased reflexes, speech and memory defects, but he soon improved and was discharged; he was readmitted ten months later. His reflexes were as before, but

he now had sluggish pupils and optic atrophy. At autopsy this atrophy was found to be complete, and there was a double pachymeningitis with marked compression of the right hemisphere so that it was considerably smaller than the left. Plain changes of general paralysis were found in the cortex. Notwithstanding the pachymeningitis and the compression of the right hemisphere focal symptoms were not recorded.

The third general paralytic, No. 602, E. M., aged 48, was admitted four months after the onset of her psychosis, which began with neglectfulness, getting lost, rambling and silly talk. She had characteristic physical and mental symptoms except for absence of elation. About two years before death there was loss of power in the left arm after a convulsion, the permanency of the paralysis was not stated, but at autopsy a traumatic looking lesion was found in the right temporal lobe and certain areas in the frontal cortex showed marked loss of cells, especially in the deeper layers. This condition was considered as suggesting a possible source of the paralysis, although it did not explain it.

The fourth general paralytic, No. 528, M. S., a colored woman of 50, had failing eyesight at the age of 48; she was blind and presented Argyll-Robertson pupils when admitted two years later. The knee-jerks were absent; there were tremors, expansive ideas and speech defect. She gradually deteriorated, and died of ischio rectal abscess. The brain was small, showed moderate general atrophy, but no foci. Optic atrophy was complete and there was slight thinning in the postero-median columns of the spinal chord. The general paralytic changes were clear in the cortex, and rather more marked on the right side.

The fifth case of general paralysis, No. 566, J. P., aged 45, also had optic atrophy; failure of vision occurred about a year and a half before death, and this was followed by blindness three months later. The knee-jerks were absent, he was erratic and grandiose. The cortex was characteristic, the optic nerves completely atrophic, and there were streaks of thinning in the middle of Goll's columns and in Burdach's columns. Convulsions occurred late in the disease without anything being found to explain their occurrence.

The sixth and last case of general paralysis, No. 637, J. H., aged 48, had had syphilis fourteen years before death. A year before admission he became suddenly unconscious (no details). About a month before admission he had a similar attack with resulting partial paralysis (transitory?) of the right arm and leg and mental symptoms, delirium, violence; destructiveness appeared about the same time. On admission the symptoms suggested strongly locomotor ataxia, absent knee-jerks, Argyll-Robertson pupils, at times abdominal pain; lumbar puncture was positive. His memory, except for a slight gap, was good; writing was fair, and there was no speech defect, except on test words. Two months after admission he became weak, dizzy and

unconscious and paralysis of the right arm and leg again appeared for a short time. The arms were inco-ordinated and the strength decreased; the leg movements were jerky; speech was thick and slurring. Three weeks before death the right side was again flaccid. The autopsy showed general atrophy of the brain, hemorrhagic pachymeningitis and a small flattened left hemisphere (apparently the result of pressure) which contained no focal lesions. The microscope showed slight changes of general paralysis, and in spite of the marked signs which led to a clinical diagnosis of locomotor ataxia there was only moderate diffuse thinning in Goll's columns and slight thinning along the mesial border of Burdach's columns. It seemed probable that the varying right-sided paralysis could be, in a general way, correlated with the pachymeningitis and resulting small left hemisphere.

Next came two cases, the first doubtful, the second clinically diagnosed as general paralysis but anatomically proven to be cerebral syphilis.

The first case, No. 527, A. W., 42, intemperate, had fits in infancy. He became talkative, boastful and violent in the summer of 1907, and was admitted the following winter, but on account of marked improvement he was discharged two months later as recovered, although his wife still noticed certain "imagination". The pupils were normal, the knee-jerks active. He was readmitted sixteen months later after an attack of elation and violence with claims of being God and a king and died ten days afterwards from cellulitis, the result of an injury. The pupils which had before been normal were now sluggish, the speech defective, the tongue and fingers tremulous; lumbar puncture was positive; his memory, except for the periods of the psychosis, was good. The brain showed little grossly and a search through the cortex with the microscope also showed little except some debris and cells in the pia of non-inflammatory type. The perivascular spaces were rather large, and there was some thickening and fibrous change in the vessels. No granulations were found, and the large blood vessels were almost normal, with only an occasional plaque of intimal thickening. This case anatomically was surely not general paralysis, and the evidence for syphilis was wanting clinically, and was not established anatomically.

The next case, No. 502, J. H., aged 40, had had syphilis four or five years before admission. He had been a plumber and salesman and for some years had been alcoholic. Three years after syphilitic infection weakness, headaches, and some delusional ideas and hallucinations appeared. His complaints on admission were of headaches and pains in the legs. The pupils reacted, but were irregular and unequal, and the right external rectus was weak. Speech was thick; there was some weakness of the left grip, a staggering gait and diminished power in the legs, especially on the right, with right ankle clonus and exaggerated reflexes. Memory, judgment and insight were defective. He was not expansive, but had a feeling of well-being.

Progressive deterioration occurred in all fields; he became helpless and was in bed most of the time for the last two years of life. The clinical diagnosis was general paralysis. This diagnosis was not confirmed microscopically, but the pia of the cortex showed numerous endothelial and connective tissue cells, and the cortical blood vessels showed an increase of endothelial elements: Ventricular granulations were present; there were lymphoid and occasional plasma cells in the pia of the medulla oblongata, and to some extent in the vessels within the medulla. These findings combined with a girdling endarteritis and some infiltration of the vessel sheaths, completed the evidence for cerebral syphilis. In the spinal cord there was a loss of fibres in both pyramidal tracts, but especially in the right; and the postero-median columns were thinned out. The diminution of power in the legs, especially the right, and the staggering gait, were believed to rest on this degeneration of the posterior and lateral columns.

Dr. Dunlap pointed out that the psychoses in the above cases could seldom be brought into obvious relation with the anatomical lesions, and referred to the fact that even in general paralysis only the coarse fact of the existence of a wide spread destructive anatomical process could be safely correlated in most cases with the existence of the diffuse mental deterioration, but that any fine correlation was impossible; several cases had shown that even the typical changes of general paralysis could exist in an individual who was regarded by his friends as in his normal condition.

Dr. CHARLES I. LAMBERT presented "Seven Cases of Cerebral Syphilitic Arteriosclerosis, One Case of Presenile Dementia, and Four Cases of Brain Tumor."

Cerebral syphilitic arteriosclerosis (W. H., M. P., L. M., M. S., L. S., A. Mc., S. C., all were received from the St. Lawrence State Hospital by the Psychiatric Institute).

Only a composite clinical-anatomical digest of the main features observed in these cases is here presented. The history of syphilis was not established in any of these cases, but inferentially from the anatomical features, as well as suggestive clinical evidences, infection probably occurred in all; in the life history are mentioned gonorrhea, loss of eyesight due to small pox, ocular palsies occurring early, optic atrophy, miscarriages, early hemiplegias and in one megalomaniac features in the psychosis.

The development of mental symptoms was closely associated with subjective complaints and physical signs. The dominant trend of both the mental and physical symptom-complex was of a cardiovascular-cerebral character. Among the more prominent incipient symptoms evident or complained of was depression, confusion, inability to think clearly, a certain feeling of incapacity, of fatigue and exhaustibility, forgetfulness, slow thinking, lapses in the train of thought and poor retention; rapid changes in mood, restlessness,

irritability, seclusiveness, suspicious, and vague delusions and *hallucinations* were prominent. On the physical side a cardio-vascular-cerebral syndrome, several times with renal complications was present and headache and dizziness, vertiginous and syncopal attacks were common. Irritative phenomena as twitching and jerking of face and hands particularly convulsive seizures were observed in all cases except one; weakness, paresis or palsies of eye muscles, of a single or several extremities of one side or signs of paraplegia were present in all of the cases.

The gross and microscopic anatomy of these brains is much the same for all cases. There is only a slight reduction in brain weight, the pia is usually thin but slightly hazy, more so over the base than convexity; the cranial nerves are usually free but sometimes held in fairly strong old pial adhesions; the cerebral arteries always show a high grade arteriosclerosis usually of a diffuse character in contrast to the nodose variety of general arteriosclerosis. The basal vessels may be dilated and tortuous, the branches of distribution likewise and the larger terminal vessels often resemble white cord-elastic for several centimeters. Focal softenings of considerable size may occur as the result of large vessel occlusions, more often the long medullary arteries are the ones most affected and isolated lacunar softenings or areas of fibre rarefaction occur. A chronic granular ependymitis is the rule. The pia of the brain stem and cord is usually hazy, the cord may show secondary degenerations.

Microscopically: the large vessels show, a low, more often a high grade concentric girdling proliferation of the intima of the vessels together with splitting of the original membrane elastica and production of new elastic tissue. This new formed intimal tissue is comparatively resistant to early degenerative changes. In cases of long standing, regressive changes may considerably obscure the specificity of the process; again fairly typical atheromatous changes may be superimposed on what was formerly a characteristic syphilitic endarteritis obliterans. Accompanying this endarteritic reaction, a slight infiltration of the vessel sheaths and the pia with lymphoid and plasma cells is seen in nearly all cases but this seldom ever attains the proportions of a frank meningitis.

In a resumé of the symptoms in these cases the subjective complaints of headache, of vertiginous and syncopal attacks and subjective evidences of fatigue, forgetfulness, lapses in the train of thought, impairment of retention and memory and the physical signs and anatomical findings emphasize the cardio-vascular-cerebral nature of the disorder. The vivid hallucinations and irritative phenomena, twitchings and convulsive attacks are comparatively infrequent in general arteriosclerosis as compared with the syphilitic type of endarteritis obliterans. What relation these latter symptoms particularly the irritative features bear to the arteriosclerotic process *per se* and to the low grade chronic meningitis present is not clear; the prominence

of these symptoms in these cases would seem to emphasize the anatomical differences between the general and luetic type of arteriosclerosis.

BRAIN TUMORS.—(Four cases.)

CASE I. The patient, H. B., was a woman of 66. Admitted at 53 with a history of previous attacks at 33, 38 and 43 from all of which she recovered. The last attack at 53 from which she never fully recovered began with a restless depression, twice previously she had attempted suicide; would not notice her family and "could not swallow, as there were insects in her body which would escape if she opened her mouth." On her next admission, 1902, she was childish, obstinate, untidy and careless and her memory had failed. Without any history of apoplexy her left leg had become somewhat lame and at times the left side of her body twitched; she could walk, although the left leg was not well co-ordinated. In August, 1902, several Jacksonian convulsions occurred with jerkings of the left arm and hand, the jactitations spreading to the whole side and then gradually ceased; there was no loss of consciousness. In October she had another seizure; was paroled in December and discharged in January, 1903, but not improved. Re-admitted again in March, 1903, with spasticity of the left arm and leg and dragging of the left foot; left-sided seizures continued to occur, one to four times a month during which she was conscious and usually talked. In 1904 the seizures became more severe, she became duller and drowsier but remained well oriented; her mouth was set as if to whistle; the left face looked atrophic, her left arm was set in firm contracture, stereognosis was very poor in the left hand but there was dulling of sensibility; heat, cold and pain were distinguished; the left leg was atrophic, the deep tendon reflexes were equal and increased, no Babinski sign; the tongue was tremulous, the pupils were equal and sluggish, no hemianopsia, bilateral hearing defect more marked on the left side. A trephine operation was done September, 1905, revealing a rather diffuse tumor in the right Rolandic region, a test section showed it to be a scirrhous endothelioma. No further seizures occurred for eleven months, then one which involved only the left arm; another eight months later involved the whole left side and within the next year three other convulsions occurred. Evidences of dementia increased toward the last; death resulted from lobar pneumonia.

At autopsy the calvarium was found to be very thick over the frontal regions and was very adherent to the dura, within the trephine area. A sharp bony exostosis was found growing inward in the right paracentral area.

A large, firm tumor, 5 by 6 cm. was present in the right upper Rolandic region, There was considerable flattening of the contiguous convolutions especially those of the right hemisphere and the upper two-thirds of the central convolutions were displaced inward, but not

infiltrated. The tumor was largely composed of endothelial tissue and was separated by the pia from the brain and was independent of and readily separable from the underlying cortex. On the base of the brain, numerous cortical, hernial granulations were present on the tip of the temporal lobes, and the floor of the median fore-brain ventricle was bulging. The cranial nerves and cerebral vessels were not remarkable.

CASE II. R. H. Was an intemperate woman of 64, with a psychosis of fourteen years' duration, characterized by fears and delusions. Physically, her general health was good except for a large uterine fibroid. No neurological signs observed. One week before death patient vomited after dinner, became weak and the right leg became swollen and discolored. At autopsy, a uterine fibroid, weighing 16 pounds was removed, and in the left central region of the brain, a tumor of golf ball size was found.

The brain tumor was globose, about 3 cm. in diameter, and imbedded in the left paracentral-frontal area, pressing the post-central convolution backward and depressing the anterior central convolution, but apparently not injuring its cortex but considerably the cortex of $L F_1$, the foot of which lay under the tumor mass. The pia appeared intact and lay between the tumor and subjacent cortex and the tumor could be easily shelled out. The histological structure was in all respects characteristic for a slow growing endothelioma.

CASE III. M. F. H. The patient was a well educated woman of 57, of normal make-up. Onset of psychosis four months before death, when patient wandered away from home; when found she was confused and anxious, expressed many peculiar ideas, thought "that the world had stopped, that she was going through the air on wires, that she was dead from the stomach down". Orientation was defective, grasp seemed fair, but replies consisted of a senseless elaboration regarding wires and somatic feelings and was full of discrepancies; she calculated everything in millions and trillions and her retention was poor; insight and judgment lacking; she continued restless and anxious, untidy and destructive. No neurological signs, a mild degree of arteriosclerosis, glycosuria and incontinence. The day before death weak, stuporous; death occurred in coma.

The brain weighed 1,170 grammes. Two walnut sized, independent endotheliomata made corresponding depressions in the left frontal convolutions; the more posterior one lay between $L F_1$ and $L F_2$, just in front of the anterior central convolution; the more anterior tumor lay wholly within $L F_1$. Except for moderate narrowing of the convolutions and moderate cerebral arteriosclerosis, the brain was otherwise negative.

A sagittal topographical slice was taken through the tumors, including the central and subjacent frontal convolutions. The tumor structure was that of an endothelioma; the underlying cortex was essentially intact but much compressed.

CASE IV. The patient was a Canadian guide of 28. Three months before death he complained of pain over his left eye, but was able to work. He mysteriously disappeared three weeks before admission and was amnesic for the period. On his return he acted strangely, was confused, at times quite stuporous; this condition increased. Admitted three days before death in a feeble, bewildered state; he was unable to walk, was very dull and stupid, made only occasional replies, "yes" and "no", ate little, apparently due to difficulty in swallowing. There was marked tremor of the muscles, especially of the extremities and recurring episodes in which the muscles became tense and jerked considerably for a few minutes at a time. There was also retraction of the head and tendency to contracture of the lower extremities. Voluntary movements showed considerable tremor as well as inco-ordination; no other neurological signs. Heart action feeble; diarrhea, increasing prostration and death in coma.

A hen egg-sized glioma, adherent to the dura was imbedded in the tip of the left frontal lobe and infiltrated as well as displaced the subjacent cortex and marrow. There was a moderate bulging of the left frontal lobe and the neighboring convolutions were rather dry and flattened, due to pressure, and the sulci were linear looking.

The localizing symptoms in the Case I, H. B., were typical, the site of operation accurately chosen and the relief obtained for the patient very considerable. In Case II, R. H., no evidences of intracranial growth were present; the tumor was small and evidently slow growing and displaced rather than injuriously replaced brain tissues. Cases III and IV, M. F. II. and P. C., are of rather special interest, the tumors being located in the left frontal lobe. With the improvement in brain-surgery technique, greater precision in tumor localization is being constantly sought. Increasing difficulty is met as one leaves the more focal fields and deals with the more "silent areas" of cerebral function. The frontal lobe tumors often present a confusing complexity of symptoms and distant and contrecoup features are often included so that there is little in the symptom-complex to wholly rely upon. More purely upon the objective side general symptoms of intracranial tension may be present and signs of contra- or homolateral, sometimes bilateral weakness, tension, ataxia and irritation, develop, not infrequently ocular differences and possibly aphasic symptoms when L F₃ is injuriously pressed upon. In addition to these, pressure upon, destruction or interruption of the frontal lobe fibres to the rest of the brain appear to produce rather characteristic mood and mental reactions, among which may be mentioned changes in personality, indifference, carelessness, untidiness, declining or absence of insight and judgment, shallow, emotional reactions with a certain facetiousness in manner (*Witzelsucht*), not infrequently expansive delusions and paranoic ideas are marked; apathy, somnolence, confusion, stupor and a simple dementia have been emphasized but are probably of special importance only in the context.

INTERHOSPITAL MEETING, WARD'S ISLAND, JANUARY 25 AND 26, 1912.

Present:

Psychiatric Institute, Drs. AUGUST HOCH, DUNLAP, MYERS, RICKSHER.

Hudson River State Hospital, Drs. MELLEN, HELMER, CARPENTER, TODD.

Middletown State Homeopathic Hospital, Drs. WOODMAN, HORNER, BINGHAM, THOMPSON.

Kings Park State Hospital, Drs. ROSANOFF, CARLISLE, SHUFFLETON, LEAHY, DURGIN.

Long Island State Hospital, Drs. HOLLY, SMITH, AGNEW.

Central Islip State Hospital, Drs. ULLMAN, CORCORAN.

New Jersey State Hospital, Trenton, Drs. COTTON, HAMMOND, SANDY, FUNKHOUSER.

Bloomington Hospital, Drs. RUSSELL, CAMPBELL, PRINGLE, DURHAM.

Bellevue Hospital, Dr. KARPAS.

From New York City, Drs. L. PIERCE CLARK, ATWOOD, KAPLAN, CASAMAJOR, SCHUMAN.

In addition to the above, the physicians of the Staff of the Manhattan State Hospital,

Dr. GEORGE H. KIRBY: "**Dementia Præcox Deteriorations without Trends.**" Published in full in another part of the present issue of the BULLETIN (pp. 372-383.)

Discussion of Dr. Kirby's paper:

Dr. ROSANOFF: Dr. Kirby has pointed out that these cases without trends are apt to be of earlier onset than other cases of dementia præcox. It may be that the early onset accounts partly for there being no trends. A young individual who has not yet come much into contact with society is not apt to have direct concrete conflicts. Yet this does not mean that there is unimpaired judgment. It is simply that, their apathy having developed early, such patients fail even to take the trouble of constructing any misinterpretations. Dr. Kirby has, however, also referred to an older case, which is not in that respect typical. Yet such cases occur. But here it is admitted that as to the patient's inner life we know little. If we knew more about his inner life, perhaps we would not put him in the same group. In this connection I am reminded of an experience we had only a few days ago on one of the wards at Kings Park. It happened that we had to vaccinate a large number of patients. One patient who was not known to have any particular trends, or any particularly dis-

turbed periods at any time, when asked to go in to be vaccinated, began to resist and became extremely violent. He said he did not want poison to be put in his blood or circulation. As I said, no trend had previously been observed; yet, when he was forced into a somewhat unusual situation, he showed judgment defect just as clearly as it is apparent in cases with well marked or possibly even absurd trends.

Dr. GARVIN: I was very much interested in Dr. Kirby's excellent paper. What seems of especial interest is the fact that while many of these patients develop their psychosis during the adolescent period, they do not express any sexual trends. From analysis of other types of dementia præcox, one can not escape the conviction that sexual difficulties play a prominent part in the cases under discussion, yet when we study the patients we do not find anything pointing to sexual conflicts. Whether this is real or merely a defense mechanism is an important question. Brill seems to be inclined to regard the shut-in personality as a defense mechanism against homosexual tendencies. Further investigation of the sexual life in this type of deterioration might yield important results in such patients who are more accessible.

Dr. SPELLMAN: The question which this paper and the discussion raise is whether we are not laying too much stress on the sexual life, and whether we should not consider a broader physical basis. Everybody has a certain amount of fundamental potentiality which permits of a certain amount of exertion. Is it not probable that there are individuals who have a native weakness in that direction and who, when they arrive at 14 or 15, or perhaps 30, are exhausted. In relation to Dr. Rosanoff's case, I think it is difficult to say whether the reaction was really comparable to a delusion formation. A good many normal people are opposed to vaccination.

Dr. PHILIP SMITH: It struck me that all the cases presented were male cases. I would like to ask if female cases were observed to show this inactive apathetic deterioration? As far as my observation goes in the hospital, they are certainly rarer.

Dr. EVARTS: Is there any difference in the heredity in these cases as compared with the ordinary type of dementia præcox?

Dr. POATE: Dr. Kirby's statement that many of these cases are found outside the insane hospitals is quite true, I believe. When I was at the Rome State Custodial Asylum, I started to work on the genesis of acquired imbecility. I did not have the opportunity of finishing this, and could not get complete statistics, but from the work I did, I should say that in about ten hundred patients in that institution, perhaps 10 per cent had developed deteriorations beginning about the age of puberty, and almost always associated with masturbation. These persons appeared to have been of fair intelligence, and had made good progress at school. They became indifferent and apathetic; were unable to employ themselves, and were sent to the

institution, where they never expressed any peculiar ideas as far as the records show; presenting simply an indifferent, apathetic state.

In regard to the women, I think that in three hundred cases there were only two that showed this type of deterioration; however, the records were not completed. That would not tend to show, at least, that this condition is much more common in men.

It would appear that this class of cases would be especially fitted for re-education. They are individuals who were originally of fair mental development; and who have merely withdrawn themselves from the external world, without, apparently, any actual disturbance of their relations with it. That is, one would have to overcome merely an apathy; there would be no delusional system to distort and misinterpret the simplest acts of the instructor.

Dr. OBERNDORF: There are only two points which came to my mind. The first was whether the whole slump was not an attempt at readjustment. This patient instead of finding satisfaction in his paranoid trend and hallucinations, rather resorts to the easiest method of adjustment—simply giving up the fight.

The other point is on an entirely different line. In fact most of these cases occur at the age of puberty, and are associated with certain evidences of metabolic disturbances, such as cyanosis, skin changes and occasional changes in the hairy growths. Rather than there being a conflict with the libido, it would point to a disturbance of some one of the internal secretions—a problem which has received considerable attention from certain sources, and from which in the future we may expect results.

Dr. KARPAS: It seems to me that this class of cases demonstrates very conclusively the psychological theory of dementia præcox—the introversion of the libido, separation of the patient's internal world from the external world. I do not think one can say that this class of patients had no trends; however, we can say that the working of the patient's mind is not known to us. A patient may act peculiarly without apparent cause, yet there may be a definite underlying motive for it.

Dr. FARNELL: During the last six months I have had occasion to examine school children between the ages of 7 and 16 years. In over eighty cases, fourteen showed a shut-in personality. One of these had arrived at puberty and was a typical example of dementia præcox. The remaining thirteen presented features such as Dr. Kirby described; they were deficient at school, inattentive, idle, without ambition, irritable, dreamy.

Dr. KIRBY: The cases that have deteriorated in the manner described have all shown very early what appears to be a fundamental peculiarity of makeup, viz., an autistic or shut-in tendency. This apparently deeply rooted disposition has undoubtedly a great deal to do with the subsequent mental development of the individual and leads directly over to the later appearing deterioration. Instead of

attributing the seclusiveness to the masturbation there is far more reason to look upon this pronounced auto-erotic tendency as an expression of this fundamental inclination to "grow inward," and finally to live almost entirely apart from the external world.

It is suggested that these cases might after all have trends about which we have no knowledge. One would not think of denying that the patients' minds are occupied with something, but if special trends are present they are never expressed and the patients evidently do not resort to the usual mechanisms which we find in dementia præcox.

Another suggestion is that this deterioration is a very weak attempt at adjustment, the easiest way the patients can find of sliding out of their difficulties. But here again, I would put most emphasis upon the fundamental defects in makeup and what appears to be a well-marked tendency to lead a seclusive existence.

This type of deterioration seems to be more common among the male admissions to the hospital. The number of cases is too small to say anything about the hereditary features. In one family I found that two brothers showed this type of deterioration.

Dr. GARVIN: "Chronic Paranoid Dementia following Acute Alcoholic Hallucinosis."

Discussion of Dr. Garvin's paper:

Dr. CAMPBELL: The paper which Dr. Garvin read embraces so many points, both as regards dementia præcox and alcoholic psychoses, that it is very difficult to focus a discussion. Certainly at staff meetings frequent questions arise in connection with these psychoses, and they furnish a great deal of difficulty. We try to find out whether chronic alcoholism had anything to do with the psychosis or not; sometimes this is eliminated at the previous discussion. Rather wide questions arise in relation to cases of chronic alcoholism presenting features which are like dementia præcox, because we are dealing with both etiological and symptomatic conceptions.

We have some cases where patients, not necessarily chronic alcoholics but after a spree, have an attack which is practically identical with the usual manic attack; etiologically the alcohol seems to be the important factor. Of course in that case two things are important; first, the constitutional type of reaction of the patient, and secondly, the precipitating cause. Then again a person who has had what appears to be a fairly typical alcoholic psychosis, may later have a similar psychosis, and yet one may not be able to say that the alcoholic indulgence has played any part in the second attack.

I remember quite distinctly one case of a woman, with a rather typical acute alcoholic hallucinosis, who cleared up after a few weeks. The patient made quite a good recovery and went out. Very shortly after she went out, her son came down with scarlet fever; she was in poor circumstances and had to nurse him, and again she had another

attack quite identical with the first attack. Again she had a third attack, practically of an identical nature, without our being able to say that the patient had taken alcohol to excess. Here in the second and third attacks we had what appeared to be an alcoholic hallucinosis. Now why should the second and third attacks be identical with the first, which apparently was the reaction to a certain poison. In rheumatism one may get a depressive hallucinosis without being able to specify any other definite poison. Why do we have this definite type of reaction?

In those cases of alcoholic psychosis which go on to a more dementia præcox-like development, of course it is very important to have a very thorough analysis, to know the inner life of the patient previous to the development of the psychosis and the alcoholic indulgence.

Dr. KARPAS: No doubt chronic alcoholism is a psychopathic symptom—it may be primary or secondary, the latter in certain forms of psychoses. The question of homosexuality in relation to alcoholism is rather important. It is unfortunate that the alcoholics do not yield to analysis; they are unreliable, their will power is deficient, and they show some alteration in temperament and character. The fact that an alcoholic always associates with men is a strong suspicion of a homosexual proclivity—perhaps the unconscious craving to come in contact with his own sex. Not infrequently one sees drunkards exhibiting homosexual traits,—such as kissing, hugging, etc. The alcoholic psychoses present homosexual traits. In delirium tremens, sexual symbols are in evidence, such as snakes, elephants, etc. In acute hallucinosis, the content of the hallucinations is decidedly homosexual. The alcoholic paranoid condition shows also some homosexual stigmata; the ideas of infidelity are rather suggestive of homosexuality; the patient says “My wife is untrue to me. She is like all women, hence I am justified to return to my own sex.” It is also to be remembered that the Korsakoff psychosis is not a pure form of alcoholic psychosis, but rather meta-alcoholic. In such cases we usually find other conditions such as visceral changes, etc., which are responsible for the psychosis.

Dr. HOCH: I think Dr. Campbell has spoken of the essential points in this problem. It seems to me that the organic deliria, of which the typical alcoholic delirium is a good example, that is, those cases in which there is marked defect of apprehension, with variations in the level of consciousness, with speech defect, etc.—that these deliria are more closely related to the Korsakoff pictures, whereas the hallucinoses are much more apart from them.

It does not seem to me very likely that delirium of the organic type and the hallucinoses are so closely related as it would seem to some. Bonhoeffer speaks of a different localization; even Kræpelin has thought of the possibility of the delirium being due to a more diffuse disorder of the cortex, and that the alcoholic hallucinosis is of a more limited disorder. As I say, the question is whether the differences

are not more fundamental than such a conception would suggest. Again, Bonhoeffer has pointed out that alcoholic hallucinosis seems to occur in certain people, and the deliria in others, so that it is rather rare to have an individual with an alcoholic delirium later develop an hallucinosis. It is also known that hallucinosis occurs not so much in chronic alcoholics as after a comparatively short alcoholic period, particularly after debauches. And finally, chronic alcoholic hallucinosis rarely follows Korsakoff or the ordinary acute delirium.

All this, as well as the facts which Dr. Campbell mentioned, namely, that manic states may be produced by alcohol, or that, as in the case which he mentions, an alcoholic hallucinosis may occur, and then without alcohol, but under another etiology, the same type of psychosis—all this goes to show that poisons evidently produce, on the one hand, more uniform mental states which are more closely related to organic reactions, and, on the other hand, liberate more psychogenic mechanisms. From this point of view it is not to be wondered at that dementia præcox developments should be found on the basis of an alcoholic etiology.

Dr. CLARK said that in private practice he was inclined more and more to look upon the alcoholic episodes in the development of the different psychoses as mere episodes in a more frankly deep-seated disorder. Undoubtedly the trend of most workers in this field was in the same direction. Such analyses as just given were sound views which confirm this opinion.

Psychiatric studies ought to outline as far as possible the essential symptoms of the mental disorder so that, as in neurologic studies, one may indicate what trends are correlated or are dovetailed together and what are coincidents of the disease and quite unrelated. This standard in psychiatry may be difficult of attainment but ought to be striven for.

Dr. GARVIN: I think one of the most important problems to be taken up in the study of this group is a very careful analysis of the personality of the patient; the reason for the habit and the reaction of the individual, not only to alcohol, but also to any other disturbance which tends to throw him off his mental equilibrium.

There is no doubt that the personality of the patient has a great deal to do with the induction of chronic alcoholism. This we see quite well in individuals of manic-depressive makeup, both in the manic and depressed types. Those manic-depressives who resort to alcohol in order to overcome their depression seem more apt to develop acute hallucinosis than those of the manic type. This seems to have been the case in the fourth patient under discussion. Alcoholism has come to be regarded more and more as psychopathic symptoms, but there is no doubt in my mind but that prolonged abuse can, in certain susceptible individuals, eventually bring about the development of a psychosis of a type resembling paranoid forms of dementia præcox.

Dr. C. FLOYD HAVILAND: **"The Relation of Manic-Depressive Insanity to Infective-Exhaustive Psychoses."** Published in full in the August number of the BULLETIN, (Vol. V, pp. 260-274.)

Discussion of Dr. Haviland's paper:

Dr. GARVIN: I was very much interested in Dr. Haviland's paper, having some years ago worked up a series of sixty-five cases in the infective-exhaustive group, in which I also found a close association of manic and delirious features. It is rather interesting to note that the majority of Dr. Haviland's patients developed their psychosis in connection with infections incident to childbirth. I would like to ask if he did not find upsets developing more frequently in primiparae than in multiparae. It is my impression from previous investigation that infective-exhaustive conditions were more commonly seen after the first childbirth. In some of the cases there seemed to be a disproportion between the infection and the mental symptoms. A closer investigation of this point might reveal some important data with reference to individual types of reaction. Factors other than the infection doubtless play an important etiological rôle in the cases under discussion.

The apathetic states mentioned by Dr. Cotton are occasionally seen, as also mild depressions with loss of interest. It must not be forgotten that a delirium-like reaction with more or less marked subsequent amnesia may take place in high degrees of manic excitement without infection.

Dr. PHILIP SMITH: It seems to me that this question of infection producing manic features will perhaps later on explain the true etiology of manic-depressive states, that is, whether or not manic-depressive insanity is not due to some other infection not yet explained. I recall a case in 1904 in which the prognosis seemed rather good as regards further recurrence of an attack. This was a case very much like the one referred to by Dr. Haviland, coming on after a criminal abortion. She was in the hospital for months and went into a delirious state with hallucinations, flighty tendencies, and then there was a sudden clearing up after the infection had subsided; she appeared to have a clear conception of what had transpired although at the time she seemed to be disoriented and memory was impaired. I had occasion to see her with her husband during the past year and she stated that she had no recurrence, was perfectly normal and had been well since discharge. The trouble apparently was due entirely to the infection.

Another case which I recall was that of a patient who went through a sort of delirious phase in which she showed erotic tendencies. Following this she became apathetic and remained so for about a year. She was transferred to another ward where the environment was more congenial to her and then suddenly began to take interest in the work on the ward and left the hospital in a recovered state. Since then she

has become pregnant, and has passed through a normal labor without any mental disturbance.

In regard to infection producing dementia præcox features, I recall one case admitted in 1904; the temperature at times reached 105 degrees. But this was not explained as there was no definite etiology or source of infection. She recovered from her physical symptoms but remained in the hospital for about five or six years and finally died of tuberculosis. She never recovered mentally but passed into a condition of advanced mental deterioration.

Dr. HOCH: I have been very much interested in Dr. Haviland's valuable paper. In our general scheme of work in psychiatry, it is our duty to more and more circumscribe definite reactions, and what strikes me as particularly valuable in Dr. Haviland's contribution is the fact that he has here shown some impurities in the ordinary manic reaction, certain features which do not belong to that type of reaction only, and he has been able to show etiological reasons for these impurities. Whether similar conditions occur without infections or toxics or exhaustive etiology, remains to be seen. There are a number of side issues in his cases which have interested me quite a little—a number of things which I think might very well be given attention as we look over our cases. One is the rather remarkable gain in weight which some of these cases have shown. I have wondered what such striking gains as 40 pounds mean, just in what conditions they occur and whether they are seen in simple manic states. I have more the impression that these remarkable gains come more particularly after delirium-like conditions.

Another striking feature which Dr. Haviland found in one or two cases, as I recall, is that manic attacks occurred which looked pure enough, but in which there was a complete amnesia for that entire attack. I have seen that before, and of course the simplest way out of it is to say it is a mistake, but it seems to me I have seen it in well observed cases who seemed to be willing to co-operate. I think it would be worth while to look more closely into this question of amnesia in manic attacks.

And finally, Dr. Haviland mentioned in one of his cases that the patients sometimes describe retrospectively their affect entirely differently from what it appeared to us at the time. I have also noticed this before. This too might be taken as a more or less superficial statement and of no account, but I think it really means something and it certainly deserves further study.

Dr. HAVILAND: In reply to Dr. Cotton's question, I would say that I purposely confined myself to this one group of cases, that is, cases showing essentially manic excitements with delirious admixtures, that could be traced to infective exhaustive etiology; I did not try to cover the larger groups that occur. Off-hand, I am unable to recall any one case with this onset that did go into deterioration, although I do remember a case with which many of us here are

familiar, that I first had under observation. She came to the hospital after much the same etiology and presenting a picture quite like those cited. Later she lapsed into a condition which looked very much like deterioration; subsequently, while on Dr. Smith's service, she recovered, after a duration of about one year.

In regard to the frequency of the development in primiparae or multiparae, I might say that in the cases reviewed, the women who have borne former children, outnumber those who have developed the psychosis after their first labor. In my cases, four developed after first childbirth and five after having had other children.

Of course there are different forms of reaction following this period. Just at present, I have two cases on the ward, one a depression following puerperal toxemia and the other a stuporous condition accompanying a very severe mastitis. Both are improving and I feel will finally recover.

Dr. HOCH: "**Review of Bleuler's Schizophrenia.**" (Published in full in the August number of the *BULLETIN*, Vol. V, pp. 238-259.)

Discussion of Dr. Hoch's paper:

Dr. ROSANOFF: It was a pleasure to hear such a clear review of Bleuler's schizophrenia. It seems to me that we have come to a point where we might as well ask ourselves: How much farther advance could be expected from increasing finesse of clinical diagnosis? Are we likely to derive new clinical criteria for classification?—Having been interested of late in a study of the subject from a different point of view, namely, from the point of view of conditions determining the origin of the various types of psychoses, I have been impressed with the evidence which has been collected in the course of the study showing that the natural basis for a classification of psychoses is not that of clinical definition. We are dealing, apparently, not with disease processes, but with manifestations characterizing special biological varieties of the human species. These varieties are related to one another, all being, in the Mendelian sense, recessive to the normal condition; but they differ from one another in degree of recessiveness. Thus we have, as a variety which is slightly recessive to the normal condition, manic-depressive insanity; and as one which is markedly recessive, epilepsy. These widely separated varieties are, no doubt, connected by many others representing every shade of difference in degree of recessiveness, just as we find to be the case with other biological characters, such as color of eyes, color of hair, and the like. Moreover, the manifestations of each variety will depend in a measure upon environmental influences; such manifestations, though clinically different as occurring under different conditions of environment, must, for the purpose of diagnosing or defining the variety, be regarded as equivalents.

Only a definite knowledge of the exact conditions of mating under which each distinguishable variety originated would seem to sup-

a natural basis of classification. To any one who has studied the problem from this point of view the inadequacy of clinical criteria unaided by biological ones must seem very obvious. Is it surprising that without such aid clinicians are led in such divergent ways?

Dr. Clark said he thought this reemerging of types once differentiated into one group such as Bleuler has done would seem to be a retrograde one not to be classed as fortuitous as Kræpelin's grouping the manias and melancholias into the all-embracing manic-depressive insanity. He had grave doubts that autism would be as helpful to clinical psychiatry as Dr. Hoch's shut-in personality concept. If Bleuler's autism makes for a Mendelian unit in biopsychological entity we may be able to trace an hereditary basis for the mental and physical makeup of the dementia præcox. From Dr. Hoch's analysis one is impressed with the vast storehouse of Bleuler's work, but does it essentially get us further along in a more exact understanding of the præcox group? It did not impress him that it did.

Dr. OBERNDORF: "**Cases Allied to Manic-depressive Insanity.**" (The paper is published in full in another part of the present issue of the BULLETIN, pp. 393-405.)

Discussion of Dr. Oberndorf's paper:

Dr. CARLISLE: I think one of the reasons that the allied group has been comparatively large might be attributed to the fact that there are certain conditions present, or that atypical symptoms appear in the cases which we have been unable to correlate with our previous conceptions of manic-depressive insanity, but which we are gradually coming to find must be included in that group because we seem to be widening our conception of the disorder. I was interested to hear Dr. Hoch speak in the discussion of Dr. Haviland's paper, of cases where there was amnesia; also that Dr. Kirby has seen manic types resembling querulent paranoid states. These and similar conditions, if they come to be recognized as definite traits of the manic-depressive group, will undoubtedly tend towards taking many cases out of the allied group. With the best and most careful inspection of certain cases at staff meeting, a sincere difference in opinion occurs at times whether or not a case belongs to this group on account of some clouding or a little amnesia, in which case hysteria is suggested; or, again, because a case might show syncope or an attack suggestive of an epileptic psychosis; or, on account of atypical excitements with peculiar ideas, based on sexual complexes. It seems to me that the inclusion of some of the milder forms of these symptoms in the straight manic group will tend greatly towards the elimination of a considerable number of cases from the allied group.

Dr. HOCH: Before the discussion goes any further I should like to say something in defense of the allied group. In the first place, I think Dr. Carlisle is mistaken about what both Dr. Kirby and I have said. We did not mean that these were typical manic features. In

our study it is absolutely necessary that we emphasize special peculiarities or special features in clinical pictures. What enters usually into our working knowledge of the psychosis are the typical traits, and we are too apt to slur over features which do not fit this. It is, however, very essential that we should lay as much stress upon these atypical manifestations, and I am sure that it was with a view to emphasizing this, to taking care that the description and the study of a case was complete, that Dr. Meyer originally introduced the group of "allied" cases. If it serves that purpose, that is to say, if it is used for the value which it has for our study and for sharpening our attention to unusual traits, then this group fulfills its purpose. On the other hand, Dr. Oberndorf is quite right when he says that it should not include cases which we can not study adequately, or have not studied adequately for external reasons such as the fact that the patients speak a foreign language, etc. That would go directly contrary to the only justifiable reason for that group. There has been a great deal of criticism of the allied group, and from one point of view one might criticize it and say it does not mean very much, but it does mean a great deal from the viewpoint of studying traits which are not typical. For that purpose it would be still better not to speak of allied groups but to have a great many small groups. It need not come into our official documents, cards, etc., because that would be too confusing and would perhaps deteriorate into emphasizing names rather than mechanisms. But for the purpose of study I think the making of small groups with special features is to be highly recommended.

Dr. CARLISLE: I did not mean to imply that anything like amnesia was typical of manic-depressive insanity, but it seemed that there were cases of that sort which belong more properly to that group than any other.

Dr. WOODMAN: I have given some thought to the subject of just how large we should make the allied group, but have not fully focused my ideas. But it seems that in looking over the large number of histories, and also looking over cases that have been with us for many years, this manic syndrome, the alteration of periods of activity and periods of slowness, periods of active emotion and periods of emotional depression, is to be found in quite a variety of conditions. We have seen this alternation not only in manic-depressive insanity, but in cases that to my mind show a deterioration of the dementia præcox type and in cases of general paresis. So it would seem that the manic syndrome can co-exist with other psychological tendencies that we have been accustomed to think necessarily excluded it, and that not all cases with alternating excitement and depression are even allied to manic-depressive insanity.

Dr. GARVIN: In reviewing these cases in the allied group, did you find any preponderance of depressions over excitements, that is, were there more atypical depressions or more atypical excitements?

Dr. OBERNDORF: It would be hard to answer that, as some attacks

were circular; but I think that on the whole excitements were apt to cause a little more trouble.

Two years ago I looked up the allied to dementia præcox group and have since continued that study. Very few of the cases in which we give a diagnosis of dementia præcox, or allied to it, get well. I think most of those who are sent out are merely sufficiently improved to warrant a trial at home but are not considered recovered.

I feel that Dr. Kirby takes quite a different view from the one Dr. Hoch has expressed here to-day. So far as Dr. Kirby's remarks go, I think that one of our principal mistakes has been that we have emphasized minor points often without taking into consideration the main features of altered mood, such as depression or excitement. Such things as paranoid trends have caused us to keep separate from the manic-depressive group, cases which after all were fairly typically manic. However, I agree with Dr. Hoch that we do not wish to force cases having atypical features into our manic-depressive group, but I feel that we should not ally cases for lack of information, of accessibility, or of anamnesis, and say it is best we can do, but on the contrary, should throw out such cases in which our examination is defective as incomplete. This seems to me practical and rational. I do not wish to remove the allied groups entirely, but would rather have them contain a small group of well-studied cases under the unclassified heading, such as Dr. Hoch suggested. In that way I think that if a person were, in the future, inclined to study, for instance, the alcoholic cases allied to manic—which seems to be quite a distinct type—he could do so without wading through the great mass of heterogeneous cases which are now put into this group.

Dr. Hoch made the remark that he did not believe in classifying the case as allied to manic-depressive, on the ground that one lacked information, or an amnesia, or because the patient could not speak the language. I believe that Dr. Kirby has suggested placing a great many cases in the allied group for that reason, on the ground that in the absence of complete data, the nearest approach to a diagnosis was to put it into the allied group. I would suggest eliminating these cases entirely by putting them into an incomplete group. I think it is quite valid to form a very small group of symptom-complexes under "unclassified" which could afterward be studied in time to come.

DR. KIRBY: I have never looked upon the allied groups as anything more than provisional designations for cases that need further investigation because the unusual character of the clinical picture. In many cases much difficulty is undoubtedly due to the fact that we can not get a sufficient history. In atypical symptom pictures we may recognize that the case has a certain relation to one of the better defined groups, and it is therefore more convenient for purposes of reference to keep the case near the group to which it seems closely related. I think Dr. Meyer primarily intended that the allied groups should serve some such purpose as this. He pointed out, for in-

stance, that we met with a great number of benign and recurrent psychoses which did not correspond entirely to Kræpelin's description of manic-depressive insanity. For that reason the allied to manic-depressive group was suggested and for similar reasons other allied groups were put forward.

Dr. ROSANHOFF: Our attitude has been similar to that expressed by Dr. Kirby. I was a little surprised to have the question brought up of keeping cases which have not been completely worked up out of the "allied" groups. As a matter of fact, I do not understand just what Dr. Oberndorf means by "completely worked up." No case that I know of, or ever heard of, has been completely worked up. The data may be sufficient for definite classification, though they may be insufficient for other purposes, and vice versa. By putting a case in an "allied" group we simply signify a resemblance of its features to those of a more definite group, a resemblance which is not close enough for unqualified inclusion in the definite group.

Dr. HOCH: The group of manic-depressive insanity is not one which is well circumscribed or ever will be well circumscribed. Therefore our classification will always be somewhat arbitrary, but for practical purposes of statistics it is well to have expressed by names certain tendencies, and in that respect the two groups of manic-depressive insanity and allied to manic-depressive insanity serve our purposes, while for the purpose of study the making of even smaller groups is to be recommended, with a view of determining what is the cause of the special features.

Dr. OBERNDORF: I do not wish to abolish the allied groups, but, on the other hand, to have a great number of smaller groups which contain these rather atypical symptom-complexes. We all realize of course that no cases have been completely studied, but there are many cases where the defects are so gross that no intelligent picture of the mental disorder can be obtained, and such cases I would keep separate from the unclassified group.

Dr. KARPAS: **"The Clinical Interpretations of the Serological Content of the Blood and Cerebrospinal Fluid, with some Reference to Cytology and Chemistry of the Latter, in Mental Diseases."** (Published in full in the August number of the **BULLETIN**, Vol. V, pp. 210-237.)

Discussion of Dr. Karpas's paper:

Dr. COTTON disagreed with the reader's remarks regarding the cell count of the cerebrospinal fluid in paresis, and called attention to the fact that no examination of the cerebrospinal fluid could be considered complete unless a differential count was made and the character of the cell stated as well as the total number of cells per cubic millimeter. To make this differentiation, the only practical method was that of Alzheimer, and called the reader's attention to the fact that such examination had not

been made. Dr. Cotton also disagreed on the total number of cells per cubic millimeter in general paralysis. The reader claimed that a large cell count did not indicate general paralysis, which is contrary to the experience in this work at the New Jersey State Hospital at Trenton. Practically, the only diseases which have to be differentiated from general paralysis are chronic tubercular meningitis and cerebrospinal syphilis. The cell findings in tubercular meningitis are practically the same as they are in paresis, and it is often difficult to distinguish from cerebrospinal syphilis by examination of the cerebrospinal fluid.

Dr. Cotton took exception to the reader's statement in the discussion, that there was no reason to confuse meningitis and paresis by the cell findings. Dr. F. S. Hammond also corroborated Dr. Cotton's statement regarding the cell findings of these diseases.

Dr. LAMBERT: "**A Summary Review of the Syphilitic and Metasyphilitic Cases in 152 Consecutive Autopsies.**" (Published in full in the August number of the BULLETIN, Vol. V, pp. 196-209.)

Dr. FOLSOM: "**Manic-Depressive Syndromes in Dementia Præcox.**"

The comparatively early differentiation of manic-depressive cases from those of dementia præcox is in the great majority of cases simple enough, and in a large percentage of instances, even if all previous history were lacking, the purely formal symptomatology in the one group stands out in such distinct contrast with the special trend reactions in the other, that the prediction of the ultimate outcome may be made with almost absolute accuracy from the time of the first observation.

On the other hand, we are all familiar with a much smaller percentage of these cases which appear to be characterized by a mixture of purely formal symptoms and ominous manifestations, either occurring synchronously or alternating with one another, and which after long periods of observation it seems necessary to continue as *allied* to the one or the other psychosis according to one's interpretation of the diagnostic weight of evidence.

The more ordinary prognostic factors, such as duration before admission, presence or lack of insight, etc., which have justly accreted value in the clear cases, would appear to be of limited, if any, value in these unclear psychoses which often ultimately disclose an ominous content in the presence of some insight and a reliable history of short duration. If a brief formulation of more valuable factors for an early prognosis should be attempted, attention would be drawn to the necessity of the most careful inquiry into the constitutional traits of the patient, his habits and especially defects of sexual adaptation, into the affective reactions under various circumstances, and into the content of the psychosis with particular reference to special trend reactions.

The following case has been selected in an attempt to illustrate these points in a concrete way:

It is the case of a young man of 25, at the time of admission (April, 1909). On admission he was restless, walking about in a theatrical sort of a manner, with a swaggering, strutting gait, and continually creasing his trousers with his fingers. He was talkative, flippant, showed flight of ideas and great distractibility. He smiled and laughed and said he had never felt better in his life. There was no evidence of hallucinations. His orientation was somewhat hazy. A few months later, while he was still elated, he smeared his clothes over with butter and became very profane and obscene. He also called himself Physician to the Queen, High Ruler, etc., and the next moment would say he was crazy. At the staff meeting he was diagnosed manic-depressive insanity, on the basis of two previous depressions, with reduction of activity and recovery, the sudden onset of the present attack, and the essentially manic picture, although a certain stiltedness was noted. Ten months after admission he is described as playful, facetious, distractible, laughing boisterously, at times threatening and assaultive. He said that at Bellevue he had been presented with a casket of jewels and that the United States Government had offered him a billion dollars to cure people of insanity.

In July, 1910, fifteen months after admission, he had a general epileptiform convulsion of a tonic character followed by clonic spasms of several minutes' duration. There was no aura, he suddenly fell unconscious from his chair while eating, and he frothed at the mouth and bit his tongue, but there was no incontinence. There was a stuporous condition for twelve hours afterward, then recovery with no residuals. Two months afterwards he had another convulsive seizure, not fully described, but apparently of the same character. There have been no such manifestations subsequently and inquiry of the relatives indicates the absence of any epileptiform manifestations at any time previous to his coming to the hospital.

In November, 1910, eighteen months after admission, he continued overproductive and at times irrelevant in his speech and there were flighty tendencies evidenced and there was also considerable distractibility, but now more ominous psychotic manifestations were definitely noted for the first time in the shape of auditory hallucinations and an apparent neologism. He heard all kinds of voices constantly saying "Exandria". He said: "I had the peculiar imagination that my soul was in your pencil, in the ink—there is a voice in the point of that pencil, it says 'Exandria'—I hear someone speaking about me all the time, they call me 'fairy, masturbator and all such things'—if God damns a man would Father D. undamn him"? He then gave an account of three homosexual experiences in which he was the active agent twice in the practice of coitus buccalis and once in the practice of solomy: and he claimed that now

these matters were a source of worry and self-reproach. Attempts to obtain further explanations at this time were fruitless.

Several months later the pertness and distractibility were again in evidence, and he continued to hear voices talking constantly saying "Exandria, which has a terrible meaning, as if I should become such a name myself"; telling about things that he had done in his life, and calling him "crazy, Turk, just as if some one had died in his body and was calling him names". At this time he also gave expression to peculiar ideas of unreality, as follows: "I see myself as through photography, as if I were constantly dying and still holding on to life—I feel as if I had died and as if my spirit were coming back from another world to talk to you—then I would brighten up a speck, then I see glory and happiness and the voices come and that is the end of it all. If I could realize that you are all human beings, I would cry perhaps because of the grief and anguish I have suffered, and then become a sensible man. I don't know what is the matter with me, to think that I am lost in eternity." At this interview he admitted masturbating several times a week, although he had denied it, except rarely, at previous examinations.

In September, 1911, he claimed that the voices had stopped talking to him two weeks previously. He spoke of his former hallucinations as having been imaginations, his previous expansive ideas as delusions, his early manner and attitude as foolish. The peculiar phraseology was also markedly less conspicuous, yet even then his explanation of the hallucinations was involved and unclear, as follows: "It was like a word thought, I thought that my whole substance and physical being were in the words—I was sound itself concentrated into sound". He also stated at this time that for ten days before admission he had heard voices which seemed to be spirits of people in the grass.

It now seemed important to view the case more carefully and the history which he gives himself, and the family's information which supplements it, is essentially as follows:

Family History: He is said to be free from hereditary influences.

Personal History: At the age of 5 he had a fall while on board ship which caused some headache and vomiting, but he was not unconscious and he recovered without apparent after-effect. As a boy he learned poorly, and later in business college he made little progress. With the exception of a few half-hearted attempts, he could never be induced to take up any employment.

At the age of 12 he was circumcized because of excessive masturbation. This the patient confirms and says that he began to masturbate at that time after an erection during the act of defecation. He continued masturbation, and at 16 he had an attack of depression, for which the patient accounts by his self-remorse over his inability to control the habit. This attack was characterized, as he says, by self-deprecatory ideas and great inactivity. His family state that he was

melancholy and inactive, and that they had great difficulty in getting him out of bed in the morning. He recovered in six months.

At 17 he began to indulge in normal sexual intercourse. At the same time, the patient says, some friends, among them one W— (who plays a rôle in his present psychosis) told him that they were earning money by allowing wealthy young men, whom they designated as fairies, to indulge in sexual perversion upon them, and advised him to do the same. He did so and gave himself over to frequent homosexual practices of various sorts, and for a time practiced masturbation, normal sexual and homosexual intercourse with special satisfaction in passive fellatio.

At the age of 20 he had another depression which he accounts for by his worry over his sexual life. The attack was similar to the first. His people say he was very inactive, spoke of being cursed and damned to hell. He adds to this that he heard voices calling him names indicative of his sexual perversion. He recovered, again, in about six months. Gradually he resumed his sexual habits, worrying at times about them.

About three months before his present attack, he states, women became disgusting to him, and he obtained his sexual gratification essentially through masturbation. During this masturbation he had various fancies, especially of having fellatio performed on him, or of seeing intercourse in others, or he thought of naked women; and he adds that he frequently smoked a cigar while masturbating. About three weeks before entrance he stopped all sexual practices. He claims this made him feel "kind of sick." About this time, he saw, however, a girl in the park, and, although he says that women disgusted him, he indulged in sexual fancies with this woman, and about a month before admission, having seen the picture of a well-known woman in the paper, thought she and the woman in the park were the same. Then he read in a book that many great men were born in April, and as he himself was born in that month he felt he was destined to greatness. A voice told him to put the book on the ground and that some one would pick it up. The young woman rode up, made a motion as if to dismount but rode on. He now knew that she understood that there was a love affair between them, and when a day before commitment he heard some one say "the wedding dress is ready," he knew it meant they were to be married. The commitment seemed to him a plan on the part of the prominent father of the woman to bring about this marriage, and in Bellevue he saw a box and thought it contained jewels, presents from the father for him. He retained these ideas for some months after entrance, though only spoke of them later. In addition to that, he had several other experiences for a few days before admission. He tells that he had a feeling that every human being was concentrated in him and that he in every human being, and he thought by spitting in the grass the spirits inside would come out. He thought there was no God and

that he was the Holy Ghost. Every one in creation was himself until he was born, and after he was born every one else was in him. It was finally learned that this began by his feeling that his friend W— was in him, and that the spitting referred first to him. He describes W— as rough, but manly and strong; he admired him for his strength. He swore and went with fairies; "but I had a terrible fear of him, I felt toward him, for example, just as if one person would go with a woman that is engaged to his friend, the latter might like to kill him—yet he had a sort of fascination for me—a few days before I went to Bellevue Hospital, I went to see him but he was not at home—something told me that his spirit was in the bath room, that I would see him like a monstrosity in hell with horns and hoofs like the devil—his brother came up with a dog, I thought it was W—, I became afraid and went to the bath room and spit down the toilet—he had a sort of rat body and no clothes on—previously I thought that his spirit was inside of me, but after I came here I thought that I was him and he was me, that his spirit looked through my eyes and that my spirit existed in him." He denies all homosexual relations with W—. Another experience that frightened him occurred two days before commitment, when he saw a picture of the Inquisition in a store window, and immediately thought there was to be an inquisition which meant to him: "The whole world would have morbid ideas of suicide, or that one person would stop and kill another. I was afraid that every one else in the world would be insane and that I would be the only sane one left and that everything to me would be a mystery—I imagined that everybody thought as I did, that other people knew my thoughts." This very evidently suggests the clue to a previously inexplicable utterance, when he said that the United States Government offered him a billion dollars to cure insanity, and further inquiry brings out the fact that during this period, when the feelings of unreality were so prominent in the early part of his psychosis, he heard a voice telling him of this offer on the part of the Government and that he would be able to effect cures by the great personal magnetism that he possessed.

His people say that the onset was three weeks before admission, when he became sleepless and talkative, excited, rambling. He finally threatened his mother and was committed.

He explains another oddity occurring during his early residence, viz., his persistence in shaking hands with a previous examiner, as being due to the fact that the latter was a fine specimen of physical manhood and he was attracted by him. It will be recalled that W— appealed to him for this same reason.

Various other trends which have occurred from time to time remain unclear or entirely unexplained. For example: he first heard another patient use the word "Exandria" in the fall of 1910; and for over a year he has heard voices saying this word. At first it meant "nothingness" to him and he had the idea that he would gradually

sink into a state of mere nothingness, and consequently the word had a terrifying effect upon him; and at that time he had the idea that he had actually died and that he was really existing in this world in a different form than his own physical self. He thought that his "bones were softer and the blood as thin as water and the brain was soft." He continues to hear this word now while sitting about the ward and sometimes he hears it coming from his urine—it has a terrible meaning to him, but further explanation he is unable to give. Likewise, attempts to establish a psychogenic explanation of his two convulsions have met with failure.

At the present time he is seclusive in his relations with others, an indifferent worker, and often appears somewhat abstracted. Auditory hallucinations of a sexual nature similar to those previously described continue. In addition he has complained recently of seeing a man's face appear unexpectedly in front of him, and it worries him and frightens him to have such experiences. He can not think of any one of whom the face reminds him—it is that of a perfect stranger. He appears to co-operate when questioned, to the best of his ability; at times he shows considerable feeling when speaking of the changes which have taken place in himself, which he attributes to worry over his sexual irregularities, but usually his mood reaction gives one the impression of a certain amount of superficiality and emptiness. He is rather fond of switching conversation about concrete matters to abstract discussions, such as "the Nature of Life," or "the Mystery of Life." Very recently he has heard a voice saying that the examiner is a "fairy."

We have then a case who never applied himself to anything and who had previous depressions with reduction of activity, in the latter of which there were hallucinations with a sexual content, and apparent recovery from each attack. Then came the present breakdown, with its peculiar beginning but, on the surface, essentially a manic syndrome as the salient feature in the early psychosis, though even then there were atypical indications shown by the affected mannerisms and occasionally by special trends, which augured for a more serious disorder although in the presence of benign symptoms. All along there are seen evidences of abnormal sexual tendencies. Finally he stops intercourse and then masturbation and a state of considerable anxiety supervenes as he develops the idea that a girl is in love with him and that a friend whom he both admires and fears is inside of him, and he tries to spit him out, etc. This emotional condition is then succeeded by a mood of exhilaration and exalted ideas, such as described, and some hallucinations. Then followed the after-course in this hospital as outlined.

At the presentation the patient appeared fairly natural at times and spoke pretty clearly, but, for example, when asked what he meant by saying every one was concentrated in him and he in every one else, said, "I suppose the soul of a man was really practically nothing—

wasn't even air—was nothing. When a man's soul was concentrated he knew after he was dead that his spirit was so concentrated that his spirit would be concentrated on every part of material substance. That's why a person has a sort of fascination between material things. There's a fascination in which you look at that table—there must be some part of a soul or something to attract the focus of your eye or iris to look at that. There must be an eye or something in that.” (What does that have to do with you more than any one else?) “That's the wonderful thing—people who are supposed to be demented are supposed to have hallucinations more or less of different things in sight and hearing—I'm aware of that fact. A man might only know by some thought of his—by thinking—that other spirits were concentrated in his—he could only see everything outside of his own personal self reflected in his being. Now you have often seen different people and you say, 'Well, isn't it funny how this person resembles the other.' Well, take all the people in this world—outside of the spirit of God because nobody on this island believes in God—take all the people in the world—they all more or less resemble one another—take the Japanese and Chinese—their eyes are more or less on the slanting type—take the entire human race—it's all more or less the same—I have noticed nationalities resembling one another—people say 'You look as though you were an Italian'—another man might say 'You look like Hungarian'—I believe that all the people will get so that they will get crossed between each other—I'm looking at you as two human beings but that you yourself couldn't explain to me and tell me that you are in that condition. If I see your faults and everybody else's faults and yet don't see my own faults, then in my own idea I'm right.”*

Dr. GARVIN: What strikes me as important is the close relation of the two depressions to the patient's sexual life. The question arises, Do not these patients allow themselves to drift into states of depression rather than undergo continual sexual conflicts? In other words, is not the depression a sort of compensation for a troublesome libido? We know that in depressions sexual desires are more quiescent. This is a point of interest that might be further investigated in an analysis of these cases.

Dr. KIRBY: Doctor Folsom's case is an unusually instructive one and well serves to emphasize the necessity of paying more attention to the trends that come out in these psychoses that look at some stage like a manic-depressive disorder. However, one meets with a good many cases which have rather prominent trends, but, nevertheless, they do remarkably well, often making a good recovery. The interpretation of such cases is very difficult, often impossible without a

*The patient has made a very fair recovery since the meeting at which he was presented, so that at present he works more consistently than ever before, helping his uncle. He knows that he has been insane, makes on the whole quite a natural impression and the vague talk is no longer in evidence. He can not account for most of his ideas expressed during the psychosis.

full anamnesis and a good observation. In this particular case, for instance, if we had at first all the facts that we now have regarding the type of personality to start with and the development of the psychosis, we would undoubtedly have been a little more cautious in grouping the case. At the present time I feel that the case is one of dementia præcox and that the prognosis is unfavorable.

Dr. ROSANOFF: I should like to ask if he has not changed a good deal in his way of looking at things. One gets an impression of considerable difference between his former attitude and his present attitude. He seems to be quite observant. He has ideas about the universe that for a man of his intelligence are hardly startling. I have heard ignorant people argue in a way not altogether unlike that. Is he not now different and better than he was at the time when his hallucinations and the delusional system were more highly developed, as described in the paper?

Dr. FOLSOM: I don't really think he is. There was a short time when he denied that the hallucinations were occurring, but recently he told me that he was not telling the truth when he denied the hallucinations previously for a short period. The other day he stated he was very sure that they had occurred constantly since the time of their beginning. His conduct, of course, does not show the manic traits evidenced previously. However, there is a sort of mild indifference and also some emotional deterioration, so that I feel he has grown worse.

Dr. ROSANOFF: I should like to make a suggestion in regard to this case, as it impresses me as very striking and quite out of the ordinary. When the proceedings of this conference are published, or perhaps at a later date, I think all that are here to-day would be interested in a statement of the further progress of this case. Will he deteriorate or will he recover? I should not consider this case any more as belonging to the pure manic group than belonging to the pure dementia præcox group; it brings to my mind cases which seem to be between the two and which mostly recover. I know in our hospital we would not put this case in the dementia præcox group on the showing the patient made to-day. We would put him in an "allied" group, preferably allied to dementia præcox. I certainly think it would be of great interest to know what has happened to this case a year from now.

Dr. HOLLY: It seems to me we might consider the question of a transition from one type of disorder to another form of reaction in the same individual at different periods. Some eight years ago one of our patients was at Kings Park with a well defined manic outbreak and at the end of the year was discharged as recovered. Subsequently she developed fear of going out of doors alone and for a number of weeks remained in doors. She also was possessed of the feeling that she was falling. Last fall while at a seaside resort she developed rather acutely a paranoid state and came to us voluntarily in this condition

with nothing that pointed to a manic depressive outbreak. She subsequently returned to a fairly normal condition. It is not uncommon to get cases that on first admission are considered dementia præcox and subsequently return to their normal level and then come back with a disorder that is something else. This case, I think, shows at the present time some things that point to a manic depressive disorder.

Dr. JOSEPH SMITH: Dr. Folsom's statement as to emotional deterioration in this case is quite significant. The question of grouping will depend largely upon the emotional standard of the patient. Dr. Hoch regarded him as of inferior makeup and to speak of emotional deterioration, the degree of his emotional development prior to the psychosis would have to be known. A striking thing is the vague, loose talk of the patient. Such speech is occasionally observed in manics who are about convalescing, or in those who did not exhibit any marked manic traits at any time of the psychosis. The patient has little intelligence and education and when he begins to speak about difficult and obtruse problems, he becomes decidedly confused, a phenomenon not infrequently observed in people with meagre education.

Dr. HOCH: I think that I have said about everything that I can say in regard to the standpoint which I should take in cases of this sort in my Bleuler review yesterday. By the diagnosis manic-depressive insanity or dementia præcox we are not designating a disease process, but such a diagnosis is merely a formula for a certain combination into which various factors enter. Sometimes such a one-word diagnosis as dementia præcox covers pretty well a rather definite set of cases. At other times it is very difficult to express what we wish to say by such a simple formula. The present case showed certain striking abnormalities of makeup—two episodes of depression, after which he seems to have reached his former level, and finally a manic attack, the development of which was ominous and in which, so far as we can see, he showed from the beginning certain atypical features, although the main characteristics were apparently rather plainly manic. We evidently have no right to look upon trend reactions, as Dr. Kirby said, as something necessarily serious. But here the ideas were even at first strikingly absurd, which means, of course, much out of touch with reality or with what might be possible. I do not think we are far from wrong if we look upon the homosexual element as quite important and as explaining some of the symptoms. At present there is no emotional reaction but still marked hallucinations and still peculiar fancies which are expressed in a decidedly peculiar manner. All this points, to my mind, to more serious mechanisms such as we find in dementia præcox and the prognosis is certainly more doubtful.

RESIGNATION OF COMMISSIONER BISSELL.

Mr. Herbert P. Bissell, who was appointed legal member of the State Hospital Commission on March 21, 1911, by Governor Dix, resigned on November 7, 1912, to accept the position of Justice of the Supreme Court of the Eighth Judicial District of the State of New York. Mr. Bissell was graduated from Harvard College in 1880, admitted to the bar in Buffalo in 1883, and was for ten years a member of the law firm of Bissell, Sicard, Bissell & Cary, of which Wilson S. Bissell, the law partner of Grover Cleveland, and later Postmaster General, was the senior member.

Mr. Bissell has served as a judge advocate and major on the staff of the National Guard, in which he took considerable interest for many years. He has served at times as president of the board of education of East Aurora, trustee and curator of Buffalo Library, trustee of De Veaux College, president of the Independent, Ellicott and Harvard clubs of Buffalo, and has taken an active interest in numerous other organizations. He is a member of the University Club of New York and the Erie County and New York State Bar associations, the Lawyers' Club, Sons of the American Revolution, etc. He has also been connected with the Niagara Gorge Railroad Company in the capacity of general counsel for many years.

Since he has been connected with the State Hospital Commission, Mr. Bissell has taken a great interest in the care of the insane in the State, has familiarized himself to an unusual degree with the administration of the hospitals, and has devoted a large part of his time and energy in advancing the interests of the department.

Although his numerous friends are gratified at the recognition accorded him in his designation as Supreme Court Justice, the necessity of severing his connection with the work of the State hospitals has been a source of regret to all who are interested in the care of the insane in this State.

REVIEWS.

KARL ABRAHAM (Berlin). "Attempt at a Psychoanalytic Investigation and Treatment of Manic-Depressive Insanity and Related Conditions." *Centralblatt für Psychoanalyse*, Vol. II, No. 6, pp. 302-315.

Freud claims that anxiety is derived from sexual repression, whereas we speak of fear when the emotional reaction is due to external causes. The same distinction A. makes in regard to grief and depression; the latter we can trace to external causes, whereas neurotic depression has a sub-conscious basis. Anxiety, according to Freud, arises when sexuality demands satisfaction which the repression prohibits. A. adds that depression arises when the patient gives up the sexual aim; he feels then unable to love and unloved, hence he despairs of life and the future. This continues as long as the cause lasts, that is to say, until a change in the situation, or in the mental elaboration of the situation, takes place. This, A. says, is not new to psychoanalysts, though the literature contains little of it.

A. has studied some cases of manic-depressive insanity, namely, two cases of cyclothymia, one brief depressive state, two other depressive psychoses, and one patient with a grave depressive psychosis at the age of 45. He, unfortunately, does not report these cases in detail, but simply gives his tentative conclusions and speaks more extensively of one patient.

He concludes, from his analyses, that the mechanisms of depression resemble those of the compulsive neuroses, in the characterization of which he follows Freud very closely, particularly the latter's views laid down in his article "Bemerk. über einen Fall von Zwangsneurose," (Jahrbuch für psychoanalytische und psychopathologische Forschungen, Vol. I). He makes, with Freud, the point that in these compulsive neuroses the libido can not properly assert itself because hatred and love constantly oppose each other; the tendency to a hostile attitude towards the outside world is so great that love is constantly paralyzed. This conflict between the natural libido and the sadism leads to weakness, uncertainty, doubting.

He then relates the history of a circular case. It was that of a man whose sexuality was developed very early. At the age of 6 he had erotic desires towards the nurse, and this led to masturbation. He was discovered by the nurse, beaten and told that if he continued he would ruin himself. In school he frequently had great admiration for other boys, an admiration which had a distinctly erotic coloring. At home he felt that his parents preferred the older brother because he was more intelligent, and that his mother loved the younger brother more, hence he developed a hostile attitude towards his parents, and envy and hatred towards his brothers; the latter led

him a few times to violent acts. He was small and rather weak, but intelligent. He had a distinct feeling of inferiority and was inclined to keep away from people. He was not attracted by women but rather afraid of them; he was, however, not impotent, though he had not much pleasure in intercourse; his chief sexual activity was masturbation in half-sleep. In practical life he had little energy and a good deal of difficulty in deciding anything. A. claims that this history resembles those of compulsive neuroses, such as he found them.

The first attack occurred after a teacher called him a physical and mental cripple. The depression was characterized by marked typical feeling of inadequacy; he felt himself to be an outcast, the depression to be a punishment, he had suicidal ideas; the whole lasted some weeks. In a year he had two or three more marked, several slight depressions.

When 28 he also began to have hypomanic swings and since then has had both. The hypomanic state is typical. In these hypomanic states he sometimes gets irritable and angry on slight provocation and feels he would like to kill any one who opposes him.

A. summarizes the condition thus:

Very early assertion of sexual libido, but later inability to love or hate; like the compulsive neurotic and through the same mechanism, he has become unable to love. Autoerotic activities give him more pleasure than sexual intercourse, and even his autoerotism is mostly confined to his sleep or half-sleep; therefore there is a desire for isolation, and he himself says that he is most comfortable in bed. At puberty the fact that he was not on the same level with his comrades must have struck him particularly, and at the same time the sense of sexual inadequacy must have accentuated his feeling of inferiority. Then the teacher's remark which reminded him of the nurse's statement that he would become unhappy all his life if he masturbated, must have hit him very hard. Hence, when the time came to feel himself a man, the inferiority feelings increased and the first depression appeared, as is the case in many compulsive neurotics, at a time when a decision for the definitive application of the libido had to be made. A. claims that he found the same situation in all his other patients. One got depressed when he got engaged. But aside from the sadistic tendencies, to which he lays so much stress, other factors entered in two of his cases, and, in a case which Mäder published a year ago, there was a homosexual component.

Although the compulsive neurotic and the depressive start in the same way, they differ in their further mechanisms; the former uses substitutions, whereas the depressive makes use of peculiar projections which resemble those of paranoia. It will be remembered that Freud and Forenczi claim that in all paranoias we find a repressed homosexual desire. This homosexual desire, Freud claims, is repressed and converted, though unconsciously into its opposite, and then projected upon those toward whom the homosexual desire tends

to stream. In the same way A. claims that in the case of depression the patient projects his own hatred and turns it into a feeling of being hated; secondarily, this feeling of being hated is cut loose from its source and attached to other things, more particularly to the patient's personal defects. The patient then feels that he is not liked on account of his defects. The sadistic impulses, however, still assert themselves, partly in dreams and partly in tantalizing of the environment, or in desires for revenge, or criminal impulses. These things are not mentioned by the patient as a rule, but the analysis, or merely the taking of a history, brings them out, and they are very apt to appear in the manic phase. These desires to have revenge, though they arise from the patient's own sadistic tendencies, are attributed by him to the lack of affection shown by others, which in turn he connects with his own defects.

Then A. is also inclined to attribute the self-accusation, the feeling of guilt, to the sadistic impulse or to the impulses for revenge or hatred, and he thinks the greater the sadistic desire, the greater is the feeling of guilt. Yet this great guilt is also a wish-fulfillment, the wish to be a criminal in great style. In compulsive neurotics the situation is similar; the compulsive neurotic has repressed his sadism and therefore has the fancy that he can kill with thoughts. According to A. the repressed sadism leads not only to self-accusation, but also to masochistic tendencies, that is to say, the pleasure in suffering, the satisfaction in depression, the tendency to self-observation, etc.

As to other symptoms of manic-depressive insanity he offers the following explanations: He thinks that marked retardation represents symbolically death, and that generally retardation makes contact with the outside world more difficult; and that the patient instinctively slides into it for that reason. He admits that this is tentative and that there are other determinants. The ideas of poverty which so often occur in depression, he claims to be due to a symbolical representation of the actual situation, the inability to love. These ideas of poverty occur chiefly in involution melancholias, and these seem to occur particularly in individuals which have never been erotically satisfied. The idea of poverty is more easy to bear, than the idea that the erotic libido will never be satisfied.

In the manic phase the patients suffer from the same conflicts, but they take another attitude. A. suggests that mania occurs when repression is no longer possible, and he points out that just as in childhood, so in mania do the erotic desire and aggressive hatred enter consciousness together. When the patient gets manic, he begins anew. The inhibitions of the instincts disappear; the saving of inhibitory force gives pleasure, as does the fact that the patient is not hemmed in by logical demands. The play with words he regards as a re-establishment of infantile liberties. The flight of ideas allows a possibility of gliding over unpleasant ideas; it facilitates, like jokes, the getting into new trains of thought. In the manner of the manic

there is much that is infantile. That the patient whose case he described more fully, had the first manic attack when 28, might be due to the late development of his sexual puberty. At the real puberty there occurred, he thinks, only a greater repression, while later the libido increased. As a matter of fact it was towards the age of 28 that the patient turned more towards women. Finally A. admits that this is imperfect, says that he is unable to give details for personal reasons; admits that we do not know why one person develops compulsive neurosis, and another depression. He advises analysis in the intervals.

Whether the formulation of Abraham is correct or not can be determined only by careful analyses of manic-depressive insanity, and such an attempt as this should stimulate us to undertake them. Very little has been done in this direction and the task is difficult, yet these cases which we can see in the intervals are precisely the ones which invite study. Psychoanalysis, in spite of all opposition, should be taken very seriously and regarded as a method without which the important dynamic principle, the explanation of the forces at work which produce the psychosis, is left out. When we are once fully convinced of this, then we should be willing, in spite of the great difficulty which this study presents, in spite of the fact that only a constant application and struggle with the subject will lead us into grasping the complexity of the study, to do all we can to penetrate the subject.

In all probability several formulations of a mechanism which partly overlap may be possible even in the same case, and certainly in different cases which superficially may be very similar. Therefore it would be quite wrong to attempt to blindly force cases into Abraham's formula; his article should be regarded as tentative, but we should feel grateful for this and similar attempts, because they enter a subject which is a great concern of ours and in which we know so little. On the other hand clinical psychiatry in its formal side should not lose in importance through the demand which we feel that it is necessary to understand what mental reactions mean; the necessity still exists for further descriptive studies because we must be quite clear what it is that we wish to explain, and the prognostic point of view which Kræpelin introduced will never lose its force.

HOCH.

Dr. GONZOLA LAFORA. "Contribution to the Knowledge of Alzheimer's Disease or Presenile Dementia with Focal Symptoms." (Beitrag zur Kenntniss der Alzheimerschen Krankheit oder präsenilen Demenz mit Focal symptomen.) *Ztschr. f. d. gesamt Neur. u. Psych.*, July, 1911, pp. 15-20.

This is a report of the sixth case of a peculiar disease process, described by Alzheimer in 1906, developing in the presenile period and characterized by restlessness, disorientation, auditory hallu-

cinations, a grave disorder of retention, profound dementia and paraphasia.

The author's case was a man of 62, admitted at 58; onset at 57; the patient became disoriented, incoherent, irritable and untidy, took no interest in his environment, talked and laughed to himself; his retention was much impaired, unable to find his bed or place in the dining room; echololia and long continued perseveration often observed. The dementia and untidiness with destructive tendencies increased; he would tear up the linoleum and chew it ravenously, again would wander about aimlessly or lay in bed all day; finally a most profound dementia developed and the vegetative functions alone remained.

The brain weighed 1,160 grammes. No pial or cortical infiltrate, no arteriosclerosis. The nerve cells showed acute and chronic alteration, many contained much lipoid material; satellite cells were increased. The Alzheimer neurofibril alteration or pericellular fibril changes were abundant as well as "basket forms" of altered nerve cells; otherwise changes were those accompanying senile involution of the brain.

LAMBERT.

GEORGE E. SCHROEDER. "Contribution to the Knowledge of the Fischer Plaques in the Brain and their Clinical Significance." (Beitrag zur Kenntniss der Fischerschen Plaques im Gehirn und ihrer klinischen Bedeutung.) *Ztschr. f. d. gesamt Neur. u. Psych.*, April 29, 1911.

The author reports seven cases, two with senile plaques. One was a woman of 85 who suffered a transitory apoplectic attack at 84 after which deterioration was accentuated and became profound. The second case was a man of 78 who died from a ruptured aorta. The psychosis was of four years' duration and in the nature of a hypochondriacal depression with certain circular features. Both brains showed numerous plaques. Neither case showed presbyophrenic symptoms, confabulation, hallucinations or senile delirium. The author opposes Fischer's view that the plaques represent the anatomical substratum of "Presbyphrenic dementia" and agrees with Alzheimer that the plaques are not the cause but rather an accompaniment of senile involution of the central nervous system.

LAMBERT.

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NINE YEARS' EXPERIENCE WITH MANIC-DEPRESSIVE INSANITY.

BY DR. ROBERT C. WOODMAN,
First Assistant Physician, Middletown State Homeopathic Hospital.

I. INTRODUCTION.

During the past winter I have spent some time conning over the histories of our patients admitted during nine years with manic-depressive insanity, or with psychoses that might be confused with this disorder. I find 262 cases that I wish to diagnose manic-depressive insanity: 262 separate persons, for in this numeration no person is counted twice, although some of these patients have been admitted as many as five times, and in all they total 339 admissions to the hospital in the time under consideration, besides previous admissions and admissions to other institutions. These 262 are all exclusive of the involutorial melancholia group, of 160 persons, that I want to call manic-depressive insanity. They are selected from among 2,159 admissions.

In looking over these cases the first question that has raised itself is, Just what is manic-depressive insanity? Kræpelin has stated that he believes the manic-depressive syndrome to be the expression of some particular disease process. The assumption of some physical process being at the bottom of the attack is made probable by certain features. In this connection may be mentioned the inevitability with which the attacks seem to recur in certain patients, notwithstanding what we may do for them or leave undone, or so far as we can see what the external circumstances of their lives may be. It is quite the rule to find in the histories of recurrent cases that some strong emotional influence was at work prior to the onset of the first attack. Depressing circumstances result in an attack of depressive insanity, or a sudden ebullition of manic activity, or a manic attack appears at some time of excitement. The recurrences, however, show little of this casual relationship, and seem to come from reasons which may well spring from

the physical condition. This is the more plausible as we see in so many depressive cases that with the depression there is a loss of appetite, indigestion and general physical failure. While, if the manic attack be not too severe during the excited period, or a relatively normal period, that stands in place of it, nutrition is splendidly carried on. The way some cases die points as if the manic-depressive disturbance of metabolism were itself sufficient to cause death. But, even this conception of a primary physical condition is, as yet, of little help to us and furnishes no diagnostic or therapeutic advantage, for we know nothing of the nature of it, nor of its cause. On the other hand, if we assume such a disease process, it is difficult to explain the sudden variations in the symptoms, the rapidity with which patients may pass from excitement to depression, or *vice versa*, while mixed states present another problem of their own.

In view of all this difficulty and uncertainty as to just where we stand, the second question that arises is, Can we get along without the conception of manic-depressive insanity? And the answer must be no: in the present state of our knowledge we are in no position to do so. The older terms, mania, melancholia and circular insanity, make distinctions where none exist and conceal the important fact that the three conditions are frequently found in the same person. In the 262 cases that I call manic-depressive insanity 92 have shown attacks both of excitement and depression, and this does not express the whole situation, for many of these cases have been under observation as yet but a short time, and it is a frequent experience to find mild traces of the opposite phase during recovery where the symptoms do not amount to an attack. Some of the more characteristic of these cases have been included among those showing both phases, and not only the alternate state prevails in these patients, but also the tendency to recurrence.

One hundred and eighty-six have had more than one attack.

I conceive manic-depressive to be the form of insanity characterized by a tendency to recurrent manic attacks, or

recurrent depressed attacks, or most characteristically by both, not leading to profound deterioration of the emotions, to great loss of interest, not to such incoherence as points to predominant dissociations of thought, blocking of thought, substitutions, symbolisms and complex reactions.

II. DIFFICULTIES OF DIAGNOSES.

(a) Cases with excitement and depression, and intervals of calm reasonableness and normal behavior, are sufficiently numerous and sufficiently plain to obscure the fact that the characteristic signs become less and less clear as we pass from those cases to others which resemble them in some particulars until they grade off to where the symptomatic differentiation becomes difficult or impossible. Our material showing these difficulties in a tabular form is as follows:

	Men	Women	Total
Manic cases readily accepted at staff meeting.....	64	45	109
Depressed cases readily accepted at staff meeting..	13	20	33
Placed in the allied group but really manic-depressive.....	22	26	48
Manic-depressive attacks erroneously diagnosed..	12	13	25
Paranoid manic-depressives.....	4	6	10
Prolonged excitements.....	3	14	17
Manic cases quickly fatal, first attacks.....	4	—	4
Called dementia præcox but really manic-depressive	8	8	16
Uncertain dementia præcox or manic-depressive insanity.....	10	25	35
Recurrent undifferentiated depressions.....	10	7	17
Undifferentiated depressions, single attack only...	30	40	70
Depressions at involutional period.....	30	130	160

Of our 262 cases 142 were accepted fairly readily by the staff when they appeared at staff meeting for the first time, and 109 of these 142 were excitements, and only 33 depressions. Even in these 142 there were sometimes differences of opinion on the part of one or more members of the staff, while among the remainder, 123 in number, there were great differences of opinion, or hesitancy in announcing a conclusion, and even yet, as their histories have developed and unfolded under our observation, some of our physicians would not accept them all.

(b) It is hardly to be supposed that the attacks of depression of manic-depressive insanity are to the attacks of excitement as less than one is to three, and it must be that a goodly number of depressions not included are related to manic-depressive insanity. In this category are to be found a great number of the involutional melancholias excluded at this stage, but which are now commonly included in the manic-depressive group. As appears by the table we have 70 undifferentiated depressions, and many of them must also belong to the manic group. One reason for thinking that many depressions not sufficiently characteristic to be recognized are manic-depressive in their essential nature, is to be found in the frequency with which in the family history it is noted that one or the other parent was of melancholy disposition or a suicide, and the frequency with which depressions, perhaps not severe enough to lead to commitment, appear in the collateral lines. This leads to a point that I wish particularly to make, namely, the failure of retardation as a diagnostic symptom. I do not mean to say that it is not characteristically found in many manic-depressive cases, but it has not been present as uniformly, as constantly, to so great a degree, or so typical in character as, *a priori*, we had expected to find it. In the lighter cases it is least characteristic, so that among all our depressions the review shows that at staff meeting we are able to identify only three in their first attack as manic-depressive insanity, and even in these three the decisive diagnostic factor in one was rather a manic-depressive heredity than the degree of retardation present. Some of the staff wished to reject the second as not retarded enough, and the final diagnosis rests rather upon the appearance of manic symptoms during convalescence. Something that appears clinically to be slowing of the general mental processes goes with any depression or deep abstraction, while in the manic-depressive insanity we are likely to find the retardation limited to slight incapacity for mental work or disinclination to application. An anxious restlessness may dominate the picture even in young persons. On the other hand, similar cases that appeared at first most characteristically retarded are now,

after a lapse some years, in a state where we are at a loss to tell if they really belong to manic-depressive insanity, or are going into deterioration.

(c) Why were there 48 patients that we now regard as manic-depressive insanity considered allied? Thirty-four of the 48 presented excitement, 14 depressions. The depressions were considered allied because retardation was not sufficiently in evidence, or because of the appearance of restless anxiety which was thought to exclude retardation, or because retardation was accompanied by other symptoms suggestive of dementia præcox. The excited cases were called allied for a variety of reasons; 13 cases for dementia præcox reactions in some particular; one man at 59 who had had six attacks in 35 years was thought to show deterioration concurrent with the manic-depressive state; four were manic-depressive constitutions, two were arteriosclerotic men, three complicated by alcohol, four were first attacks in old people, in three hysteria was considered; one was a manic excitement with active tuberculosis, and one with some puerperal infection; in two the syndrome was imperfectly developed. All of these cases we may now accept as manic-depressive insanity. But there are also, in our undifferentiated group, 10 men and seven women with more than one attack of depression, who have not shown the manic syndrome, nor yet have they shown a retardation which will enable us to classify them.

(d) Besides cautiously considering some of our manic-depressive cases as doubtful or allied, we have, after balancing the evidence, fallen into the opposite mistake and rejected certain cases which time now indicates are manic, thus:

- Six called alcoholic psychoses.
- Two called general paresis.
- One called arteriosclerotic depression.
- Nine called undifferentiated depression.
- One called traumatic psychosis.
- Four called exhaustion psychosis.
- One psychasthenia.
- One called hysterical.

Three more called exhaustion psychosis are likely manic-depressive.

(e) When we first began to make the diagnosis of dementia præcox, we hoped that we had signs which would enable us to pick out with a good degree of precision cases that would deteriorate, and to a measurable degree we have been successful; but there have been difficulties from the start. Thus, there are eight of each sex diagnosed dementia præcox by all or part of the staff whom, after reviewing their histories, I would want to put in the manic-depressive group. Mistakes have also occurred in the opposite direction, and there are four of each sex whom the examining physician called manic-depressive insanity who now appear to have been dementia præcox from the start. Besides, I have the abstracts of nine men and 21 women in the collection where I must profess inability to decide. They do not become greatly deteriorated, show some tendency to alternation of excitement and depression, and yet the content of their thought is such all or part of the time as to make many of the staff feel confident that they are cases of dementia præcox. These cases and the cyclical cases with still more pronounced scattering of the intellectual faculties deserve more scrutiny than we can give them here, where in passing I want only to emphasize their existence.

(f) The cases of paranoid manic-depressive insanity have created discussions in staff meeting out of proportion to their number. On review, it seems to be unwise to attempt to exclude them from the manic group, for they are running the usual cyclical course, and many unquestioned cases not classified as paranoid with each attack revert to old grievances which they keep in the background during their normal intervals. All but one of our four men and seven women in this group have had two or more attacks, and three men and four women have become sufficiently improved so that they are no longer patients at the hospital. In only one of these patients is the recurrent insanity predominately of the depressed type.

(g) We should not pass on without referring to another group—the prolonged excitements. These cases on the manic side are to be compared with the prolonged depressions, and such long cases in reality modify unfavorably to

quite a degree the general prognosis of the psychosis. We have admitted, and with one exception have here yet, three men and fourteen women with prolonged excitement. On admission most of these were diagnosed quite confidently manic-depressive insanity. One man was called alcoholic insanity, but there was a history of a depression ten years before. Only two of the women had had a previous attack. Three of these were admitted in depression. While I speak of these cases as prolonged excitements because excitement is the predominant condition, yet most of these patients are better and worse, and have depressive episodes. The question of deterioration could be raised in most of these cases, but it is impossible to come to a satisfactory conclusion. The patients have an alertness, and when they partially quiet down for a time most of them have a good deal of efficiency; but years of continuous manic excitement, if nothing else, have put them out of touch with their former interests.

(h) With the foregoing we have probably included all the excitements that belong to the manic group, but we have not, and will not be able to specify among the depressions just which ones belong to this psychosis. Sadness is only too common a human emotion in a world of hardships, losses, disappointments and disease. Whatever its source sadness slows the stream of thought and lays an embargo on action, so all depressions may appear retarded; and we have seen above that in what have subsequently been found to be characteristic manic-depressive cases we have hesitated to label them when first observed in depression. There may be a long interval between depression and mania in undoubted manic-depressive cases, as in a case admitted in 1911 with a typical busy loquacious hypomania, who is said to have been well since she recovered from a depression in 1876 in this hospital. Our group of undifferentiated depressions includes 30 men and 40 women, some of whom will doubtless yet prove to be manic-depressive insanity, besides the 10 men and seven women already referred to as having had more than one attack, and are likely related to this psychosis.

It was formerly our custom, and is to some degree yet, following the earlier views of Kræpelin, to make a group of cases called involution melancholia, characterized by restless anxiety rather than by retardation, by allopsychic fear rather than by sadness. More recently there has been a local staff meeting tendency to classify these with the undifferentiated depressions, or with manic-depressive insanity. We formerly looked for an unfavorable prognosis, but find that this needs modification too, and that in the absence of serious or fatal bodily disease the prospect for recovery is good, often after quite a long time. More than half of these patients might readily be regarded as cases of manic-depressive insanity, but their analysis can not be taken up here.

THE PROGNOSIS OF MANIC-DEPRESSIVE INSANITY.

It is customary to give a good prognosis for any given attack of well marked manic-depressive insanity, but to expect recurrences.

Concerning the favorable prognosis of the attack, first, our 17 cases of chronic insanity (6 per cent of the total number) should point to the need of a little caution. Second, some of the cases which are not differentiated clearly from dementia præcox were considered manic-depressive insanity on admission, and they are generally of rather poor prognosis. Third, as appears later, after a lapse of years the psychosis tends to become chronic. In this connection, it may be said that I have been unable to find any characteristics in those cases that became chronic, or those that failed to recover from their first attacks, which would enable one to select them in advance.

How soon may recurrences be expected? Dr. A. S. Moore has given some averages in characteristic cases in his paper read before the last inter-hospital conference held here. He finds the interval between the first and second attacks averages a little over five years; the second and third attacks average between two and three years apart, and in cases of more than three attacks, the subsequent recurrences are at shorter intervals.

A little different point of view is to consider the effect of

manic-depressive insanity on the patient's life and activities. We find 34 men and 39 women in whom we have a history of fifteen years or more since the first attack occurred. These may be classified as follows:

	Men	Women	Total
Chronic institutional patients.....	6	8	14
Life broken up.....	20	21	41
Out of hospital most of time, fair to good.....	8	10	18
	<hr/> 34	<hr/> 39	<hr/> 73

It is the frequency, violence or protracted character of the excitement that keeps 10 of the 14 institutional patients here. Three are depressions, and one is in a chronic nervous querulent state which does not admit of her living in her own home. Forty-one have had their lives very seriously broken up by frequent or long attacks. Only 18 to 25 per cent have been able of late years to take a place moderately well in the world, and no one of these has accomplished much, and several of them are known to have been serious trials to their relatives and friends.

Among the good results I count a doctor who has had three manic attacks, at 30, 36 and 49; yet these interruptions to a professional life have been most serious, and have prevented the success that he might otherwise have expected; a farm laborer with manic attacks at 22, 28, 37 and 63, where the interruptions are less serious; a woman with seven depressions in 38 years; one with attacks at 16, 34, 40 and 54, besides nine cases in whom only two attacks have so far been recorded. Several of these with only two attacks are yet relatively young, and our experience in other cases lead us to think some at least will take a more unfavorable course as they grow older.

I have above mentioned the intervals that have occurred in three cases, under observation for many years, because they constitute the exception among cases so long under observation. In most of the others the attacks have become more frequent and the intermissions less satisfactory with passing years. There are 28 patients in all included in above 73 whose histories since the first attack cover 25 years or more; five of them have died; 12 are now patients here; five require the care of others to get along outside; one we

know nothing about; while only three married women and the two farm hands, so far as we know, seem to be doing well in their own homes. In these cases long under observation the latter attacks are longer and the patients' condition in the interval less good; they are nervous, unable to fix their attention, irritable, break down easily, and in general not fitted for the activities of everyday life.

On the other hand, it must be granted that we have no way to know about any exceptional favorable cases there may have been who have never had even a single relapse. I incline to think, however, that there are not so many of them. This opinion is reached by considering on the one hand our experience with first attacks in the past nine years. I find on turning to the cases that we have admitted and discharged as recovered 60 first admissions in their first attack. The results subsequent to discharge are as far as known to me:

	Men	Women	Total
Already relapsed.....	9	8	17
Out more than two years, no relapse.....	7	1	8
Out more than two years, condition unknown.....	7	12	19
Out less than two years.....	6	7	13
Dead.....	3	0	3
	<hr/> 32	<hr/> 28	<hr/> 60

Two-fifths of those out over two years are known to have already relapsed, while some of our cases now chronic have been the exceptionally favorable cases in their earlier years but have come to be unfavorable as the patients grew older. Cases now unfavorable had long intervals of sanity when younger; for example, Identification No. 6568, here for eight years past, had no attack between 20 and 66. Identification No. 6737 had a manic attack at 18, a second attack at 48, a third at 51, and since then has been nine years continuously confined with circular insanity. Two men with circular psychoses had sixteen year intervals between their first and second attacks. Both have now been hospital residents for nearly twenty years each.

THE PROGNOSIS AS TO LIFE.

Ten women and 13 men have died to our knowledge. Three men and two women committed suicide, all after leaving the hospital. One had escaped. The other four

were thought to be recovered. Eighteen died at the hospital, and five of these came to their end in a peculiar manner, which I have seen only in cases of manic-depressive insanity. In these cases nutrition fails, the patient appears sick and weak, but up and around. The condition may supervene in depression, or during the exhaustion which marks the climax of a violent period of excitement. Death does not seem to be imminent until within a few days or hours before it occurs. Obstinate constipation has been found in at least two of these patients. The vegetative functions seem to fail entirely. The patient loses appetite, and if fed is not nourished. At the last the end comes very rapidly. Unfortunately, we were not able to obtain an autopsy in any of these cases.

An instance is Identification No. 6,799, a woman of 56, with repeated manic attacks of great violence over a period of nearly twenty years, with short periods of depression. On February 6, 1911, after having been preoccupied and a little depressed for several weeks, she began to be over-talkative, and within a week had passed into an extreme manic excitement. She was very restless, and developed numerous small bruises, where she had struck herself in tossing about in bed. February 14 she had become extremely prostrated by her excitement, and she was fed by feeding cup. The following night she slept eleven hours, seemed a little stronger. On the 19th there was a slight hemorrhage from the rectum, which was filled with a large soft stool, and when an enema was given to remove it, it was necessary to unpack the bowel. February 20 her temperature went up, the tongue was dry and cracked, there was great difficulty in swallowing, but she smiled a manic smile with what little strength remained. She died at 11.20 P. M. the same day.

Only four of our cases, so far as I know, have married subsequent to a first attack. One can not live with his wife; she is normal but not forebearing, and the domestic situation is distressing. The second, a woman, had an attack at 20, married at 24, and bore two children without relapse, which, however, came in 1911, at the age of 28. We

can not safely affirm that either of these cases has been personally harmed by marriage; but in either case it is a fraud on the other contracting party and a menace to possible offspring. A third, with seven attacks and four admissions up to the age of 27, married and increased his interval to five years; but he has added two children to the supply of possible future cases. The woman with no attack from 18 to 48 has had two husbands, and marriage has had no evident effect on the psychosis. To judge from this limited experience, then, the reasons why a case of manic-depressive insanity should not marry have to do with eugenics and the right of the mate, rather than the condition of the patient himself.

To summarize, in considering manic-depressive insanity we are hampered because it is a clinical conception only, and we lack landmarks to indicate its boundaries, and conclusive tests to determine what cases are and what are not manic-depressive insanity. Typical cases give us a conception from which we start, but symptomatically cases grade into other symptom groups. Among the depressions we are often at a loss as to the true relationship of concrete cases, and it is found by experience that it will not do to depend too implicitly on retardation as a diagnostic sign, or to take too narrow a view of retardation. Contrary to our earlier views we can not always draw the line of separation from dementia præcox, and the syndrome of alternate quiet and excitement is found in well marked deteriorations. Our older cases, and others to be presented by Dr. Ballou, show the unfavorable side of the prognosis of manic-depressive insanity which in a young person has an unfavorable influence upon his life and prospects. He may not marry or safely establish a family or home. Any business he undertakes is likely to be interrupted by frequent attacks of insanity, or its success wrecked by the uncertainty of his judgment and his lack of continuity for purpose. Though he may remain well for years, the recurrence always menaces, and in the latter half of life, if he lives, the psychosis is likely to become a permanent unfitness for the duties and responsibilities of life.

A STUDY OF THE DETERIORATION ACCOMPANYING HUNTINGTON'S CHOREA, WITH THE PRESENTATION OF THREE CASES.

BY WALTER G. RYON, M. D.,
Medical Inspector for the State Hospital Commission.

The object of this paper is to present the nature of the deterioration which we find accompanying Huntington's chorea. We all recognize that in senile dementia, arteriosclerotic dementia, and general paralysis, we deal with a pronounced memory defect, which apparently goes hand in hand with the progress of the disorder. The question which confronts us is, do we find this same condition in Huntington's chorea? Judging from the varying opinions given in the literature of this disease, this is evidently not the case, and therefore a preliminary review of some of the views of recent writers upon the subject, before proceeding with a description of the cases I wish to report, will not be out of place.

Frotscher ⁽¹⁾ recites three cases in one of which a "progressive intelligence defect" was prominent; another in which the dementia was only moderate, although accompanied with very marked choreic movements, while the third case showed only slight chorea, but was unkempt and slovenly, without comprehension of his situation; and finally there was a profound dementia. According to him, therefore, the dementia may be very deep or only slight, and the intensity of the dementia and the choreic movements do not go hand in hand. Curshman reports a family in which pronounced dementia is rare, while the chorea is marked. Ziehen in the fourth edition of his text-book says that there is a progressive intelligence defect, with which may be associated states of insanity. Bechterew ⁽²⁾ states that these patients show an intellectual deterioration which consists in memory and judgment defect, indifference or a certain irritability. Sometimes hallucinations or delusions, especially those of persecution, may be present, in some instances depression or excitement. The deterioration in-

creases as time goes on, until the patients finally become demented.

Arthur S. Hamilton (³) in a review of twenty-seven cases comes to the conclusion that, in the majority of the cases, the mental deterioration is apt to appear before the onset of the chorea, and that the form of the disturbance varies considerably. In those of early life he thinks it shows a higher degree of dementia, while those cases appearing at a later period present less loss of thought power, but more irritability and a greater tendency to imagine intentional affronts. The mental disturbances in both forms, however, include delusions of persecution, a gradually increasing dementia, weakness of judgment and initiative, absentmindedness, a general dissatisfaction with the surroundings, together with a growing selfishness and irritability. Ladame (⁴) thinks that loss of intellectual power is the fundamental and essential feature in every case of the disease and often the first symptom; that the affected individuals are somewhat reserved in speech, except in those instances where an overwhelming sense of injury leads them to tell of their condition and wrongs. They rarely become totally disoriented as to time, place and persons, and the degree of dementia, though very considerable in some, especially towards the last, is never nearly so great as in general paralysis or senile dementia.

A. Ross Diefendorf (⁵) in a recent monograph reviewing the mental symptoms of this disease, in a study of twenty-eight cases, lays particular stress upon the fact that these cases show a simple progressive dementia, embodying increased emotional irritability, evinced in passionate outbreaks, abuse and even violence and destruction of articles in the environment. In connection with these periods of irritability there may develop transitory attacks of despondency lasting from a few hours to a few days. There is also, in addition to the above, a gradually increasing emotional deterioration which was shown in a variety of ways, but was most often evident in connection with the patient's interests, his work, his home and his associates, some patients becoming intemperate and others immoral; a number giving up

their regular occupation and following for a long period the life of a tramp. This emotional deterioration progressed more or less rapidly, depending in a measure upon the severity of the choreic movements and the extent to which the patients were prevented from employing themselves and enjoying social intercourse. In some of his cases, the emotional deterioration was very moderate until the later stages of the disease, when, within a few months, it increased rapidly and the patients presented extreme emotional apathy. The emotional indifference, he states, appears as in dementia præcox, out of proportion to the evidences of dementia in other fields, thus offering a striking contrast to the dementia of general paralysis, which by some has been considered as analogous to that of Huntington's chorea. The evidence of dementia, in other fields, was chiefly observed in the matter of memory; the impressibility of memory usually suffered first, and later retentiveness. The defects of memory in most of the cases progressed slowly, and it was often surprising to observe how well his patients remembered even when speech had become almost unintelligible and when emotional deterioration was profound. He further states that in only three of the twenty-eight cases did the defect ever become so pronounced that the patients could not remember such well known events as the names of their parents or children, dates of births, &c. He notes that difficulties of apprehension occurred only during the late stages of the disease, the patients continuing capable of securing a pretty good grasp upon what took place about them until other evidences of dementia were far advanced. In the field of thought there regularly developed an increasing limitation of the association of ideas. The patients read and conversed but little, and even during conversation had comparatively little to say. It was also noted that even in advanced cases the patient never showed incoherence of thought similar to the desultoriness encountered in dementia præcox. Whatever knowledge they retained they were able to render coherently. These cases also showed a defect of judgment such as the lack of insight into their disease, and their incapacity.

This became more striking as the disease advanced so that frequently in the end stages even though bedridden and unable to feed themselves, they still maintained that they were able to earn their living by manual labor, sewing, and house and farm work. He found that though the dementia progressed slowly in some cases, it advanced rapidly in the last few months, coincident with the rapid extension and increase of the choreic movements.

Leri and Vurpas (⁶) claim that these cases are very much less demented than they seemed to be at first. They state that in studying the memory, which other writers claim to be poor, they were struck by the fact that these patients, when asked to give the data of their lives, remember things quite well, both old and recent events, if one is able to get the patients sufficiently to give their attention. They also claim that these patients have difficulty in visually representing objects to themselves. This they judge from the fact that it is difficult for them to describe these objects from memory.

It is seen, then, that—1. The mental deterioration and the chorea do not go necessarily hand in hand. 2. Many speak of intelligence defect and some even of the complete deterioration, but this is not very definite. And the memory defect for recent and old events, while mentioned, is often said to be relatively slight in comparison with the rest of the defect. It is, moreover, stated that a grave memory defect is rarely found. Indeed, Leri and Vurpas almost deny it. It is also stated that even in marked dementia the orientation suffers comparatively little. Therefore, Diefendorf lays much stress chiefly upon the emotional deterioration; Hamilton on the defect of judgment and initiative; Leri and Vurpas on the defect of initiative and attention. According to this the mental deterioration of Huntington's chorea presents, evidently, features which are rather different from that seen in other organic reactions in which the memory defect is distinctly in the lead.

It seemed worth while to observe some cases which are in this hospital, with a view to studying the form of mental deterioration.

The three cases that I wish to bring to your attention

were selected from a series of six cases which have been admitted to this hospital. The three cases rejected were ones who had died and were excluded for the reason that the diagnosis of the disorder was questioned in two of the cases, on account of the lack of any family history, and the third because of the meagreness of the history and the inaccessibility of the patient for examination. The cases to be presented show varying degrees of chorea, the first being slight, the second more advanced, and the third quite intense and severe choreic movements.

CASE 1. A woman, aged 48, married. Admitted October, 1910. Maternal grandfather, uncle and five among six brothers and sisters had chorea.

Nothing definite is known about the patient's makeup except that she was always of a nervous temperament.

The onset of the chorea took place at 42, and five years later, that is, five months before admission, mental symptoms appeared in the form of despondency, inability to do her house work, and also ideas of infidelity about her husband, and she finally went to the police to have him arrested.

On admission chorea of moderate degree was noticed, also increase of deep reflexes. She co-operated pretty well in the examination, knew where she was, understood the situation, knew the day of the week but not the month or year. She gave her personal history fairly well, but gave rather poor answers to questions of general knowledge. Calculation was good only for the simplest problems. She gave a very fair account of recent events. Her retention was quite good for the daily occurrences but rather poor for definite tests.

As to her insight, she said herself that she was forgetful but she rather stuck to her ideas about the infidelity of her husband.

At *recent interviews* she showed moderate chorea.

Her orientation was, throughout, good, even for time and she knew most of the names of the persons about her.

Her memory for old and recent events, as well as for ordinary school knowledge, so far as her education goes, is quite good, but she shows marked difficulty in fixing dates, or length of periods, and often says, in this connection, that she is "nervous" or that her "memory is bad." But aside from this difficulty in fixing dates one gets the impression, even in long interviews, that most facts of her life, even details, are preserved. On the other hand she has marked difficulty in calculation. She can not repeat more than six figures accurately. Ordinary retention tests give poor results, although the daily occurrences are well remembered. A short, simple story told her in simple language with considerable emphasis, she is quite unable to grasp in spite of the fact that it was told her again and again.

Other tests in which she was asked to touch the table upon hearing the number six, which was read in a series with other numbers, gave also poor results. In other words, so far as we can see, that which is most marked in this patient, is the difficulty in mental exertion which is noticeable in the tapping test, calculation, fixing dates, keeping her attention on the story, whereas the actual data of her life seem to be reproduced without difficulty.

CASE 2. A man, 61; married. Admitted March, 1906. The maternal grandmother, two maternal aunts, the mother and two brothers had chorea.

Not much is known about the patient's makeup except that he was of a mild disposition. When 9 he is said to have had chorea for a year after diphtheria.

His present chorea commenced at about 42. At about the same time mental symptoms appeared. He suddenly ran away from his son, and thought the latter wanted to murder him. He had such ideas for a week, and similar spells, as well as short attacks of despondency recurred at regular intervals. He himself also said that he heard, at times, voices swearing at him and had occasional dizzy spells. Towards the end of his stay at home, he also began to have compulsive thoughts in regard to killing his little granddaughter. This frightened him and he sought admission on that account.

During the first part of his stay in the hospital he showed fairly marked chorea, was decidedly irritable and faultfinding, and at times somewhat assaultive. His *orientation* was quite good for time and place. As to memory for old events he was able to give the year of his marriage, that of the birth of his son, but not the year of his birth or of his school years. He gave historical and geographical facts, such as towns, rivers and wars, also the presidents very fairly. He was, however, quite slow in calculating and had considerable difficulty, and in the alphabet left out a letter. Rather more disordered was his memory for recent events. He thought he had been here a week instead of four days; could not recall the events of his admission, or that he had seen the examiner at that time; gave only fair replies to retention tests.

As to his insight, it was rather striking that he tried to hide his chorea. In regard to his mental condition, he said he was forgetful. He also spoke of his compulsive thinking, said it had worried him, and of his ideas that some one might injure him, and thought the voices might have been in his head.

The patient has parole, walks around and keeps himself clean.

At recent interviews his chorea was found to be markedly advanced. He answers fairly promptly but it is always difficult to force him along mental exertion, and he is apt to get out of it by saying, "I guess I won't tell you that;"—"I guess I can't tell you, my memory is poor," or simply "I don't know." It is therefore difficult to study his memory extensively.

He is well oriented as to place and persons, and so far as time is concerned he knows the month after being urged to think it out, and even the year.

As to his memory, he is able to give many details, such as names of persons he worked for, their places and addresses, but he is quite unreliable in time relations. He might say something happened at 12 or 20, but he gives the year of his marriage, even the time this hospital was built (he lived near), but says he was first admitted ten years ago instead of six years. The presidents, rivers, wars, he gives quite well, though in all these answers he has to be urged and is apt to say at first that he does not know.

He knows that he returned to this hospital the last time two years ago, that his wife was here in the fall (correct); his daughter he says came here three weeks ago (incorrect as to time). At first he had reversed these visits. Nevertheless he gives considerable details of these visits. He evidently has much difficulty in fixing time limits generally. Thus he thinks that his present physician has been on his ward for two years instead of two months. He says that two former interviews took place three and two weeks instead of eight and six weeks ago. He thinks that they lasted ten minutes each, instead of over an hour. Yet, he knew where they took place and who was present. The most pronounced defect is again shown in his answers to calculation, when even simple tasks give rise to very poor results, and he has considerable difficulty in getting the gist of a simple story, though somewhat less than case No. 1.

An especial feature of this case is his lack of insight in regard to his chorea. He said, when asked how he was, that he was "very well"; that he had had chorea but that he was free from it at present. When his very marked jerking motions were pointed out to him he said, "I didn't think I jerked enough to notice it. I had not noticed it."

CASE 3. A man, 51. Admitted for the third time, November, 1907. Mother had chorea. Otherwise family history is unknown. Patient is said to have been neurotic and reserved but not irritable.

The onset of the chorea is not definitely known in this case, but it is clear that towards the end of his thirties he began to act very irascible, quarreled readily and finally was threatening toward his father.

First admission: At that time, some fourteen years ago, he is said to have been confused and simple, but he improved and was sent home. Chorea is not mentioned.

Four years later he was readmitted (February, 1902) having again become irascible and violent and having developed a marked antagonism against his father and some delusions about him. At that admission it is plain that he had chorea. He remained here only two months and was then taken home. His father was unable to get along with him, left him and he gradually got into a very bad, dilapidated condition; finally he did a number of queer things, such as sawing off the legs of tables and beds and exchanging them, painting the furniture and dishes in a queer way, and neglecting himself very much.

On his third admission, 1907, his chorea was very marked; his reflexes were exaggerated. He was oriented as to persons, place and year; recognized some people, but in giving an account of his life or school knowledge and answers to calculation questions he was very defective.

As to his general behavior he was, on the ward, at times, irritable and assaultive.

For the past half year patient has become worse, more choreic, more untidy and needing much more care.

At recent examinations he presented very marked chorea. The most striking features about his mental condition is, that many questions are not answered and none without urging, nor has he made any spontaneous statements during the examinations. Complicated questions were not answered at all, and to even such simple ones as, what are $2 + 2$? or, is it morning or afternoon? is it summer or winter? it was impossible to get answers, in spite of persistent efforts. His reactions were somewhat better when asked to name objects, although even here the request has to be repeated again and again. He named the objects correctly for the most part, but called a five cent piece a quarter, and in reading the watch he transposed the hands, saying it was ten minutes of five, when it was twenty-five minute past nine. Not infrequently his reactions showed perseveration. Thus he at first pronounced his name which he gave correctly, to which he added, "I was born in West Almond." After this, more especially in the first part of the interview, this answer was frequently given to a series of questions and quite irrelevantly.

With the scarcity of reaction it was difficult to judge of his memory. However, he said on one occasion, he was 43 instead of 50; that he was born in 1895 instead of 1861. In rather striking contrast to all this is that he knows what place this is and some of the persons. Also the fact that he has been here three times. Yet, on the other hand, he called the examiner an attendant in spite of the fact that the examiner had interviewed him a number of times and once in the superintendent's office.

It is, therefore, almost impossible to judge how grave a memory defect this patient has, since the difficulty in attracting and holding his attention, or in forcing him to any mental exertion, overshadows everything else. But that the memory defect can not be a very intense one, is shown in the first place by the evidence of very fair orientation and for the simple fact that he knows he has been here three times.

In summarizing these cases the main feature seems to be a marked disinclination toward mental exertion, which is so pronounced that the examination becomes very difficult. In the marked cases, it interferes even with such simple reactions, as to stating whether it is summer or winter, and seems to give rise to the fact that the patient does not

respond at all, or responds in a perseveratory manner. In the milder cases, it shows itself in calculation, in giving time relations, and in giving the substance of a simple story read to them, leading to the excuse that the memory is bad, that they are unable to tell it, etc. Whereas, on the other hand, in the orientation, even in the worst cases, there is remarkably little interference. The memory of actual facts, if sufficiently insisted upon, is found to be quite good. The whole deterioration seems to differ from that of the usual organic reactions, by the fact that the disinclination to mental exertion is of very much greater intensity than the actual memory defect, although this very likely exists, but is difficult to define. It is, evidently, for this reason that other writers have spoken of apathy or of the deterioration of the initiative. The following points should also be mentioned in this connection: 1. The fact that the deterioration goes hand in hand with the chorea is true in our cases, but this, evidently, is not so with others. 2. In all of these cases there is marked irritability, which, however, seems to depend upon the environment to quite an extent. 3. It is of some interest that all of our cases had ideas of a persecutory nature, which, however, disappeared with a change of environment.

In two of the cases the claim of Leri and Vurpas regarding the inability of these patients to visually represent objects, was investigated with about the same result as they obtained. This, to my mind, is not so much due to the fact of their inability to describe them from memory, as to the extreme difficulty of mental exertion which is present.

In conclusion I desire to thank Dr. August Hoch, Director of the Psychiatric Institute, for his helpful suggestions in preparing this paper.

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THE ECONOMIC LOSS TO THE STATE OF NEW YORK ON ACCOUNT OF INSANITY IN 1911.

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The problem of determining the economic loss due to insanity is in some respects quite different from that of determining such loss due to the ordinary physical diseases. Insanity is pre-eminently a social affair. The individual who is adjudged insane loses his status as an independent, self-governing person and becomes subject to the will of the State. His direction of his business and investments is cut off as completely by insanity as by death. Moreover, the malady as a rule is such that the patient can not be properly kept at home. Skilful care and treatment under the direction of specialists are necessary in order to safeguard the patient and others associated with him, and to afford him every possible means of recovery. The disease is ordinarily prolonged to such an extent that if home care were attempted the cost would become prohibitive except to people of large means. For these reasons the State has taken upon itself the burden of caring for and treating all the insane excepting those suffering from mild disorders who may safely remain in homes and those who enter private institutions. The expenditures of the State in caring for the insane can be definitely ascertained from the records of the hospitals. In the case of physical diseases, such as cancer, no part of the expense involved is borne by the State and consequently no part of the economic loss is definitely known.

The problem of finding the cost of insanity is further complicated by the prevalence of physical diseases among the insane. In some cases the physical disease is due to neglect of the body occasioned by the mental disturbance and in other cases the insanity is caused by lesions or exhaustion due to physical disease.

In order to secure as definite results as possible we limit our problem to the economic loss due to insanity in the State of New York for the fiscal year beginning October 1, 1910, and ending September 30, 1911. Thus limited the following items of cost are to be determined :

1. The expenditures of the State for the year on account of the insane.
2. Interest on the investment of the State for the care of the insane.
3. Cost of the maintenance of the insane in private institutions.
4. Cost of the maintenance of the insane in homes.
5. The capitalized value of the loss of the probable future earnings of new cases.

1. *The Expenditures of the State for the Insane in 1911.*

The insane patients cared for by the State are separated into two groups, the civil or non-criminal group and the criminal group. The former group is much the larger and is provided for in 14 State hospitals under the general management of the State Hospital Commission ; the latter group is cared for in two hospitals under the management of the Superintendent of State Prisons.

The 14 civil State hospitals on October 1, 1910, had under treatment 30,445 insane patients, 14,252 of whom were males and 16,193, females. There were 3,013 male and 2,687 female first admissions, and 758 male and 802 female readmissions during the year. The whole number treated was 38,384 and the average daily population was 30,949. The expenditures for maintenance of the patients in the hospitals during the year was \$6,158,982.05 and for land, buildings and repairs \$1,114,366.87. The expenditures for administration, including inspection, deportation of aliens and scientific research, amounted to \$145,977.22. The total of the three items is \$7,419,326.14.

The two State hospitals for the criminal insane had under treatment on October 1, 1910, 1,161 insane convicts, 1,023

of whom were males and 138 females. During the year 149 males and ten females were admitted for the first time and six males were readmitted. The total number under treatment during the year was 1,547 and the average daily population was 1,026. The expenditures for maintenance in the two institutions were \$264,118.44 and for buildings and repairs \$36,001.78, a total of \$300,120.22. The cost of general supervision can not be definitely ascertained as the two institutions are a part of the State prison system. It may safely be assumed, however, that the per capita cost of supervision in the State hospitals for the criminal insane is not less than that in the civil hospitals, namely, \$4.70 in 1911. At such rate the total charge for general supervision for the year was \$4,822.20. This added to the cost of maintenance, building and repairs would make a grand total for the two institutions of \$304,942.42. Combining this total with that of the civil hospitals we find the total expenditures of the State for the insane in 1911 to be \$7,724,268.56.

2. Interest on the Investment of the State for the Care of the Insane.

According to a recent appraisal made under the direction of the State Comptroller the real estate occupied and used by the 14 civil State hospitals for the insane had a total value of \$31,141,395. The personal property of the hospitals as reported by the superintendents of the several institutions at the end of the fiscal year had a total value of \$2,510,037. The real estate and personal property combined represented an investment of \$33,651,432. Computing interest on this amount at 4 per cent per annum, the rate the State is paying on its recently issued highway bonds, we find the loss in interest on account of the civil hospitals to be \$1,346,057.28. The combined value of the real estate and personal property of the two hospitals for the criminal insane as estimated by the superintendents of the respective institutions on September 30, 1911, was \$1,702,510. The

interest charge at 4 per cent per annum accordingly would be \$68,100.40. This added to the charge for the civil hospitals would amount to \$1,414,157.68.

3. *Cost of Maintenance of the Insane in Private Institutions.*

No statistics are available to show the actual expenditures and investments of the 23 licensed private institutions for the care of the insane in the State. As these institutions are patronized by the wealthy who pay rates varying from \$15 to \$75 a week, it is evident that the expense per patient is much higher in these institutions than in the State hospitals. We estimate such yearly expense to be \$1,000.

The average daily census of committed patients in private institutions in 1911 was 1,026. A considerable number of voluntary patients are also treated by these institutions, but as these have not been legally adjudged insane no account is made of them. At \$1,000 per capita the cost of maintaining 1,026 private patients would be \$1,026,000.

4. *The Cost of Maintaining the Insane in their Own Homes.*

As previously mentioned there are some insane people who are not committed to institutions but are cared for in their own homes or receive treatment in psychopathic hospitals. The number of such patients is not definitely known but is estimated by the State Hospital Commission to be about 6,000. A conservative estimate of the per capita cost of maintenance of these patients would be \$300 per annum. On this basis the total yearly cost of patients cared for in homes and psychopathic hospitals would be \$1,800,000.

5. *The Capitalized Value of the Loss of the Probable Future Net Earnings of New Cases.*

Thus far we have dealt with the cost of maintenance of the various classes of insane in the State. We have yet to determine the economic loss due to the reduced earning

power of the persons who become insane. While there is no doubt that such loss greatly exceeds the yearly cost of maintenance, the data for its accurate determination are not fully known. The National Committee on Mental Hygiene in their exhibit at the International Congress on Hygiene and Demography held at Washington, D. C., in September, 1912, estimated the annual loss of earnings of the insane patients at \$700 per capita and found the total annual loss of earnings by multiplying this amount by the whole number of insane patients. Inasmuch as no distinction was made between the earning power of men and women and no elimination was made of the patients who have passed beyond the productive age, this method can be considered only a rough approximation of the actual facts. The problem is far more complicated than this solution would indicate.

It is probable that the loss for the year due to reduced earning power of patients is arrived at best by considering only the new cases of insanity. The average person who becomes insane during the years of productivity suffers a long period of disability and finally dies prematurely. The number of years of productivity thus cut off multiplied by the annual earnings in excess of maintenance of the average patient would represent the total loss of earnings of such patient. The present worth of this amount or its capitalized value would represent the loss at the time of the first attack. Viewing the problem from this standpoint we have to determine (1) the number of new cases of male and of female patients in 1911 who had not passed the age of productivity; (2) the average number of productive years that will be cut off the life of the patients; (3) the average annual loss of earnings above cost of maintenance of a male and of a female patient. We assume the years of productivity to be between 17 and 65.

The first admissions to the State hospitals in 1911 classified according to age groups and sex were as follows:

Age Group	Males	Females	Total
Under 15 years.....	6	8	14
15-19 years.....	140	146	286
20-24 years.....	325	286	611
25-29 years.....	355	328	683
30-34 years.....	366	283	649
35-39 years.....	340	289	629
40-44 years.....	309	294	603
45-49 years.....	253	249	502
50-54 years.....	244	201	445
55-59 years.....	192	131	323
60-64 years.....	146	107	253
65-69 years.....	114	116	230
70-74 years.....	94	98	192
75-79 years.....	62	80	142
80 and over.....	48	58	106
Total ascertained.....	2,994	2,674	5,668
Unascertained.....	19	13	32
Grand total.....	3,013	2,687	5,700

Of the 5,700 first admissions 4,998 or 87.7 per cent were under the age of 65. The ages of the first admissions to the hospitals for the criminal insane and to the private institutions are not known, but if the same percentage were under 65 years there would be 139 out of a total of 159 cases admitted to the hospitals for the criminal insane, and 324 out of a total of 369 in the private institutions. The total first admissions under the age of 65 admitted to institutions during the year accordingly would be 5,461. The number of new cases cared for in homes is not known but it may be estimated at a total of 1,000 (one-sixth of the total number thus cared for), or 877 under 65 years of age. The total new cases under 65 for the year on this basis would be 6,338. Assuming the sex of the insane in homes to be in the same proportion as the insane in State hospitals, 3,433 of these first admissions would be males and 2,905 females.

The number of productive years cut off the life of the average patient can only be approximated. A census of the 13,163 foreign born patients in the State hospitals taken February 10, 1912, showed that the average period of life of these patients in hospitals for the insane was 9.85 years.

Insanity also shortens life. Just how much can not be

determined because insanity is so commonly accompanied by physical disease. The following table compiled from the Federal Census report on the "Insane in Institutions in 1904" indicates the high rate of mortality among the insane.

Death Rates of Insane in Institutions Compared with Normal Death Rates at Various Ages.

Age group	In hospitals 1904	Died in hospitals 1904	Death rate of insane per 1000	Normal death rate per 1000
Under 20 years.....	538	21	39.0	—
20-24 years.....	1649	48	29.1	6.6
25-29 years.....	2677	90	33.6	7.2
30-34 years.....	3476	146	42.0	7.7
35-39 years.....	3939	216	57.4	8.8
40-44 years.....	4207	223	53.0	10.0
45-49 years.....	3819	211	55.3	12.2
50-54 years.....	3337	190	56.9	15.8
55-59 years.....	2629	195	74.2	20.9
60-64 years.....	2188	178	81.4	28.9

An analysis of the deaths of patients in the State hospitals in 1911 by age groups throws additional light on the subject.

Table Showing Productive Years Lost by the Insane Patients Dying in the State Hospitals, Year Ending September 30, 1911.

AGE GROUP AT TIME OF DEATH	NUMBER		YEARS INSANE BETWEEN 17 AND 65		NORMAL EX- PECTANCY OF LIFE	YEARS BETWEEN 17 AND 65 CUT OFF BY PREMATURE DEATHS	
	Males	Fe- males	Males	Fe- males		Males	Females
17-20 years.	3	6	2	5	44	132	264
20-24 years.	35	28	81	57	42	1470	1176
25-29 years.	51	50	143	141	38	1938	1900
30-34 years.	112	84	486	404	35	3630	2730
35-39 years.	141	100	551	547	31	3878	2750
40-44 years.	156	122	805	738	27	3510	2745
45-49 years.	154	133	814	943	24	2695	2328
50-54 years.	170	119	1280	1211	20	2125	1488
55-59 years.	140	122	1074	1294	17	1050	915
60-64 years.	142	112	1536	1090	14	355	280
Over 65....	407	499	1754	3124	—	—	—
Total....	1511	1375	8526	9554	—	20783	16576
Average years cut off.....			5.64	6.95		13.75	12.05
Total average years cut off.....			Males 19.39, females 19.				

It will be seen from this table that the average male patient that died in the hospital was disabled 5.64 years between 17 and 65 years of age and had 13.75 productive years cut off by death, a total of 19.39 years. The average female patient that died had been insane for 6.95 years and had 12.05 productive years cut off by death. It will be noted that the number of patients dying in the State hospitals is approximately half as large as the number of new cases admitted. It is evident therefore that the average patient dying in the hospital is not a type of the whole.

The period of average hospital life obtained from the census of February 10, 1912, above mentioned, does not represent the full period of disability as it takes no account of the time elapsing between the attack and the time of admission. In the statistical report of the State Commission in Lunacy for the year ending September 30, 1910, p. 72, a table is given showing the duration of the psychosis in first admissions previous to commitment. This table shows the following results:

Duration of psychosis before commitment.	Per cent of first admissions.
Under 1 month.....	23
1-2 months.....	15
3-5 months.....	13
6-11 months.....	12
1 year.....	13
2 years.....	9
3-4 years.....	7
5-9 years.....	5
Over ten years.....	3

Thirty-seven per cent of these patients had been insane one year or more before admission, and 15 per cent three years or more. While the exact average period of the duration of the psychosis before admission is not determinable from these figures it is approximately $1\frac{1}{2}$ years.

The number of cases dealt with in the foregoing tables is not large enough to justify positive conclusions as to the period of productivity cut off the life of the average patient. We may make, however, a tentative estimate which will be

subject to revision as more conclusive facts appear. In persons becoming insane between 15 and 65 years of age the average period of insanity before admission together with the average period of hospital life of a patient may fairly be taken as eleven productive years. The average productive period cut off by the premature death of the insane and properly chargeable to insanity is taken at four years, which is approximately one-third of the period shown to have been cut off the life of the average patient dying in the hospital. This reduced number is taken because only a part of the admitted cases die in the hospitals and nothing is known of the age at death of the others, and because the premature death of the insane is only partly due to insanity. On this basis we have a total of 15 years of productivity cut off by insanity from the life of the patients becoming insane between 15 and 65 years of age.

We now have to determine the money value of these years of lost life. We assume that the person who becomes insane represents a normal type as far as earning capacity is concerned. The average annual earnings of a man and of a woman in this country have never been accurately determined. Prof. Irving Fisher in his discussion of "The Cost of Tuberculosis and its Reduction" published in the Proceedings of the Sixth International Congress on Tuberculosis, Vol. 3, p. 20, states that according to Pareto's law of distribution the average income earned by workers of all classes is about \$800 a year, and quotes Carroll D. Wright as saying that he would not regard an estimate of \$1,000 a year as excessive. Prof. Walter F. Willcox in an article in the same volume, p. 39, states that "On the whole and pending further information it seems fair to assume that the average man of productive age (between sixteen and sixty-four) in New York State earns about as much as an adult wage-earner in a factory, or, say \$580 a year." He further assumes that the average man in New York State earns not less than \$1 a day more than is required for his own maintenance.

The scale of wages has been gradually advancing even

since 1907. Judging from recent reports of the State Labor Department it would seem that in 1911 the average earnings of wage-earners was somewhat in excess of \$800. The earnings of the average woman are generally considered to be between 50 and 60 per cent of those of the average man. We shall therefore take \$800 as the average yearly earnings of a man and \$400 as the average yearly earnings of a woman. The cost of personal maintenance in each case we shall assume to be \$300 per annum. While this amount is not high it must be remembered that out of the average family income between four and five persons must be supported. If the father contributes \$800 and the mother \$400, the per capita expense of the family would necessarily be less than \$300.

On this basis the net yearly productivity of an average man would be \$500 and of an average woman \$100.

At this rate the capitalized value at 4 per cent of the earnings of a man for 15 years would be \$5,559.20 and of a woman would be \$1,111.84. The capitalized value of the net loss of earnings of the 3,433 men who became insane in the State of New York in 1911 would amount to \$19,084,733.60, and of the 2,905 women would be \$3,229,895.20, a total loss of earnings of \$22,314,628.80.

Summary.

Bringing together the various items constituting the loss to the State on account of insanity in 1911 we have :

Paid by State for maintenance of patients in State hospitals, new buildings, repairs, etc.....	\$7,724,268 56
Interest at 4% on investment of State.....	1,414,157 68
Cost of maintenance of patients in private institutions.....	1,026,000 00
Cost of maintenance of patients in homes.....	1,800,000 00
Capitalized loss of earnings, males.....	19,084,733 60
Capitalized loss of earnings, females.....	3,229,895 20
Total	<hr/> \$34,279,055 04

Appalling as this amount is, the story is still incomplete. The loss entailed by a family when the father or mother

becomes insane can scarcely be measured in economic terms. The anxiety, sorrow and distress occasioned by insanity are incalculable. Leaving these aside there is no doubt that the financial loss involved in the breaking up of home and business when insanity enters is very large. At the present time however no data on which to base an estimate of such loss exists.

Additional facts will enable us as the years go by to determine more closely the loss suffered from physical and mental diseases, but enough is now known to command our most earnest effort to check these foes of human welfare.

MINUTES OF QUARTERLY CONFERENCE.

SEPTEMBER, 1912.

Minutes of conference of State hospital superintendents and representatives with the State Hospital Commission, held at the Buffalo State Hospital, September 6, 1912.

Present—

Commissioners SANGER, BISSELL and MAY.

Former Commissioner VIELE.

Dr. AUGUST HOCH, Director of the Psychiatric Institute.

Utica State Hospital, HAROLD L. PALMER, M. D., Medical Superintendent.

Willard State Hospital, ROBERT M. ELLIOTT, M. D., Medical Superintendent.

Hudson River State Hospital, CHARLES W. PILGRIM, M. D., Medical Superintendent.

Middletown State Homeopathic Hospital, MAURICE C. ASHLEY, M. D., Medical Superintendent.

Buffalo State Hospital, ARTHUR W. HURD, M. D., Medical Superintendent.

Binghamton State Hospital, CHARLES G. WAGNER, M. D., Medical Superintendent.

St. Lawrence State Hospital, RICHARD H. HUTCHINGS, M. D., Medical Superintendent.

Rochester State Hospital, EUGENE H. HOWARD, M. D., Medical Superintendent.

Gowanda State Homeopathic Hospital, DANIEL H. ARTHUR, M. D., Medical Superintendent.

Long Island State Hospital, ELBERT M. SOMERS, M. D., Medical Superintendent.

Kings Park State Hospital, WM. AUSTIN MACY, M. D., Medical Superintendent.

Manhattan State Hospital, WILLIAM MABON, M. D., Medical Superintendent.

Central Islip State Hospital, GEORGE A. SMITH, M. D., Medical Superintendent.

Mohansic State Hospital, ISHAM G. HARRIS, M. D., Medical Superintendent.

WALTER G. RYON, M. D., Medical Inspector under the State Hospital Commission.

WILLIAM L. RUSSELL, M. D., Medical Superintendent, Bloomingdale Hospital.

E. A. NEVIN, M. D., Medical Superintendent, Newark State Custodial Asylum.

Miss BERTHA PECK, Mr. A. S. STOTHOFF and Mr. FRED J. MANRO, Managers, Willard State Hospital.

Mr. WILLIAM H. HECOX, Manager, Binghamton State Hospital.

EDWIN H. WOLCOTT, M. D., and ALBERT J. FRANTZ, M. D., Managers, Gowanda State Homeopathic Hospital.

Rev. A. V. V. RAYMOND, Mr. H. A. MELDRUM, Mr. WILLIAM A. DOUGLAS, Mrs. TRACY C. BECKER and Mrs. WALTER PLATT COOKE, Managers, Buffalo State Hospital.

Mr. E. S. ELWOOD, Assistant Secretary of the State Charities' Aid Association.

Mr. J. J. MAGILTON of the State Comptroller's office, Secretary of the Retirement Board, State Hospital Employees.

Dr. ROSS B. NAIRN, Examiner in Lunacy for the Board of Health, Buffalo.

Commissioner SANGER in the chair.

The CHAIRMAN: The conference will please come to order. The first thing on the programme to-day is the reading of the report of the Purchasing Committee by Dr. Smith.

Report of Purchasing Committee, as read by Dr. G. A. SMITH, Chairman:

The re-organization of the Committee as provided for by the Insanity Law of 1911, did not materially affect the methods that had prevailed prior to its passage. Therefore, the newly organized Committee working on the foundation already laid has undertaken to broaden the scope of its work and this report covers exactly one year of such undertaking.

The Committee has given careful attention to the means of improving and strengthening its position as a useful branch of the State hospital system. The added time at the command of the Committee, the concentration of effort and closer relations to the Hospital Commission and the hospitals, the provision for the services of professional and business men not connected with the hospitals, who are qualified to advise, have been of great advantage to all concerned.

This report deals with the work accomplished, but it is also necessary to examine the disadvantages under which the work has been accomplished.

The Committee has been obliged to operate under conditions that are unfavorable on account of the lack of proper quarters. Work room, committee room and general office all in one, plus the confusion of reconstruction going on on all sides of the space allotted to the Committee has interfered largely with successful operation. Filing of samples is an important factor and the proper facilities have not been provided, making it impossible to devote attention to this very

important feature and it is perhaps not fully understood by all of the hospitals that this sampling is a very extensive matter. During the period from September to March there are about two tons of samples received from the different classes of bidders. These samples have to be carefully filed for examination and without proper space for their care when unpacked, confusion is bound to result in some cases.

Another feature is the fixed period for purchase. In this matter the Committee is struggling with the same old problems that have heretofore existed. It is neither a profitable nor a proper method of merchandising. Food supplies, and in fact all other articles commonly used by the hospitals, with but few exceptions, should be estimated as to their approximate annual quantity divided into quarters, and the method of purchase should be only such as would keep each hospital sufficiently stocked with the items required, purchasing short supply on high market or substituting a like article at a better price when the article requiring substitution is made abnormally high by false conditions. It would be a very simple matter to keep this method of purchase working satisfactorily by a stock sheet kept by the Committee, which would show exactly what each hospital was entitled to by actual purchase. It has frequently been pointed out that the hospitals could do better than the Committee in some of the purchases. Of course, the Committee in making its purchases at fixed periods does afford the hospitals an opportunity to go into the market between these periods and take advantage of a drop in the market on the same quality, but that should not be considered as a criticism of the Committee's purchases. It is stated by some expert buyers that they believe better conditions could be obtained by purchasing in the open market in small quantities and from month to month, but the evidence which the Committee has of the results of its purchases does not justify this statement as regards the hospitals. We fully believe that a legitimate speculation is perfectly proper. When a certain commodity can be bought at a price that is right and proven to be so, whether the market goes up or down, common sense indicates that that is a good purchase and an advantageous one to the consumer, and goods of that class should be bought at a liberal allowance at that time.

With the principal disadvantages before you we can properly take up the method of operation.

The Committee has held fourteen regular and ten special meetings during the past year. Received and opened 591 bids, and the actual number of awards from bids received have been 222 or 37 per cent. Has been in conference with the State Hospital Commission frequently in relation to the approval of items for contract, approval of specifications and awards, and has had the advice and counsel continuously of the State Hospital Commission regarding its methods as well as their observation and criticism, favorable and unfavorable on results obtained. Has established a regular form of contract agreement with

all dealers, a method that the old Committee never had the time nor sufficient assistance to prepare. Has also held many conferences of special character with representatives of the trade, the principal conferences being for coal, butter and cheese, leather, cotton goods for clothing and carpet.

Referring to coal, by direction of the State Hospital Commission this matter was taken up and expert information sought early in the organization of the Committee. Allowing for the condition of the expert and public mind of the present time on the question of values, analyses, B.t.u.'s, etc., after many weeks of discussion and on account of the widely differing opinion of the experts consulted, the Committee put out a specification in which size and abundance of statement prevailed, but although it was a good technical specification, some of the trade who received it did not take time to read it; notwithstanding there were bidders who cheerfully bid on this coal, at prices as good or better than the preceding year for such institutions. Contracts were made where these conditions existed. There were, however, many hospitals for which no bids were received. The aggravated condition of labor at the mines must also be kept in mind as this was a large factor in the failure to obtain bids. The Committee, after several conferences, modified the specifications originally sent out and bids were received on the modified specifications numbering 35 in all, but some of the very best bids received by the Committee from responsible bidders were rejected by reason of the fact that they would not subscribe to the conditions of the specifications. Contracts were made only where the conditions were met by the bidder in all particulars.

The Committee took up shortly after the investigation of the coal subject was started the question of the purchase of butter and made several important discoveries, both by conference and interviews at creameries, through the Committee or its representatives, that favored the position which was finally taken. The State Hospital Commission requested that they take this subject up and present a plan for approval. The Agricultural Department requested the privilege of finally revising the specifications, their obligation being to inspect the butter bought by the Committee. The Committee's specifications provided that the bids should be sent to creameries throughout the United States. The Agricultural Department recommended that the butter should only be bought from creameries in the State of New York. Therefore the specifications were issued for this purpose, but the bids were very unfavorable on account of the high differential *above* the markets of New York and Boston. The State Hospital Commission accepted and approved a report of the Committee favoring the method of buying this butter direct through the creameries or their immediate agents, which has resulted in the purchase of 600,000 pounds at an average price of \$.2906 at the present time, which includes the cost of freight approximated. The butter is of the whole

milk product and is purchased within the State of New York, has been inspected by the Agricultural Department's representatives, officially scored and reported and remains under their charge until it is used; they are to inspect the cold storage temperatures and examine the butter for quality and report all the facts and findings to the Committee after each inspection. The butter will appear to cost more at some institutions than at others, which is unfortunate, but the failure of the Committee to have the bills paid out of a lump sum and pro-rated to the institutions on an equal basis of price at the completion of purchase has resulted in the shipping of butter to some points at a higher cost. The Committee has purchased this butter by and with the advice of the State Hospital Commission, solely for the purpose of demonstrating that the quality called for on the specifications can be obtained. It is believed to be understood by all the hospitals that there has been more or less question as to the quality received on a specified contract for quality in past deliveries. It might be interesting to know that the United States government adopted the plan outlined by the Committee of purchasing direct from the creameries and having butter inspected at the time of making, and also that in a "Report of an Investigation of Methods of Fiscal Control, State Institutions, Part I, New York," page 126, Mr. D. B. White, in charge of the Dairy Manufacturers investigation for the United States government, in a letter to the investigator recommends the same method of purchase.

The Committee also took up the question of purchase of cheese and visited the factories and consulted with the men largely interested in the manufacture and shipment of this commodity. The methods of purchase recommended by the Committee were not approved and therefore the Committee has taken no further action this year.

At a conference with the State hospital stewards the Committee presented the subject of leather for shoes, having previously obtained from each hospital a sample of the quality of leather used. Expert information was obtained as to values and a line of leather samples selected out of the whole lot and presented for consideration. After carefully considering the report and samples as selected, the hospital stewards adopted the leather recommended by the Committee, which will produce a uniform quality throughout the State at a uniform price. Heretofore the price ranged very widely at the different hospitals on all classes of leather under different trade names or brands.

The Committee has also undertaken a careful and technical study of the various cotton fabrics manufactured for women's outer clothing and has had the benefit of information from some of the best known representatives of this line. The State Hospital Commission also designated Dr. Mabon and Dr. Pilgrim to act with the Committee in the matter of the selection of standards. A complete line of samples of each class was submitted to the Committee, giving the weight,

count and tensile strength of each class and from the samples submitted the Committee selected its standards, approved by Dr. Pilgrim, a member of the sub-committee. Dr. Mabon was, unfortunately, not able to be present. These samples have since been forwarded to the hospitals by name or number, from which to select such material as they may need, the range being very wide. The Committee also at the same time standardized on cotton ducks, drills and linings, samples of which have been forwarded to each hospital.

The Committee was advised that manufacturers of carpet stood ready to supply the State hospitals at manufacturers' prices. The United States government furnished us with all their data relative to their purchases of carpet and a specification was drawn, upon the approval of the State Hospital Commission, covering this item. The grade of carpet was selected as used exclusively by the United States government in its Treasury Department throughout the country. The formula of the construction of the carpet was the basis of the quality as well as the manufacturer's name, and a successful contract has been made at a year price for all new goods. It must be borne in mind that this contract does not compete with job pieces or "less quality" that might be offered to the hospitals.

In relation to the above specifications as well as all specifications prevailing, with which the hospitals are perfectly familiar, the Committee has had in view the necessity of making the specifications so complete that the Committee as buyers and the trade as sellers would clearly understand each other.

The Committee has broadened the scope of advertising, reaching the technical trade journals of the lines represented in its specifications; has added greatly to its permanent mailing list in all lines of merchandise; and in addition had certain benefits of publicity through reading notices calling attention to the specifications and advertising.

There has been under discussion for some time the question of a testing laboratory to be operated by the State. Under the present arrangement we have used the Columbus Laboratories for flour, the Lederle Laboratories for check analysis and the Binghamton Laboratory for regular work. The Committee can not speak too highly of the work accomplished by all of these laboratories for the benefit of the hospitals. Examination of our records shows that the laboratory cost for the past year, outside of the expenses at Binghamton, amounts to \$398.20.

It appears from the records that this Committee has purchased supplies actually weighing 293,200,406 pounds, or 146,600 net tons, which would be equivalent to 9,773 box cars of 15 tons capacity each, making a solid train approximately 60 miles long. The records also show that this material cost the State \$1,737,758.73. Among these items are some worthy of attention:

Cereals proper constitute	9,869,838 lbs., costing.....	\$242,000
Fresh meats,	6,078,090 lbs., costing approximately	571,000
Provisions,	500,000 " " " ...	65,000
Fish,	400,000 " " " ...	32,000
Canned goods,	643,000 " " " ...	25,000
Dry groceries,	600,000 " " " ...	18,000
Dried fruits,	350,000 " " " ...	28,000
Cottons,	212,000 " " " ...	58,000
Rubber goods,	42,000 " " " ...	16,000
Butter,	600,000 " " " ...	174,000
Coal,	271,000,000 " " " ...	378,000
Crockery and glass,	387,000 " " " ...	14,000

In connection with the above statistics you will also be interested in knowing what all this has cost. The records of the exact cost of the Purchasing Committee's office for the year of operation show that it amounts to \$13,713.01; deducting the extraordinary expense of \$1,745.15, which has been paid for expert services for the purpose of compiling specifications principally, and for equipment, leaves a total expenditure chargeable against the operation of the office of \$11,967.86, or an average of \$997.32 per month. The principal expenses in sub-division show as follows:

Salaries and wages.....	\$7,551.64
Traveling expenses.....	1,323.39
Laboratory.....	398.25
Advertising.....	534.25
Samples.....	235.69
Stationery and books.....	1,760.16

The balance of this expense is made up of miscellaneous items, such as telegrams, telephone, postage, etc. The item of stationery and books will always be large as it covers the printing of specifications, memoranda of awards and stationery for the Committee.

The expenditure for the maintenance of the office is six-tenths of one per cent on the investment.

The Committee has endeavored by every fair and honorable means to convince the trade of its integrity of purpose and congratulates itself on the fact that throughout the year there has been so little criticism from reliable sources of the purchases made by the Committee.

The specifications have been unusually free from criticism from persons who understand them and the Committee has distributed to the bidders correct information as to the results of the bidding, not only of the individual so notified, but of the bids of all others, and has distributed memoranda of awards to the trade and to parties known to be interested in the progress the State is making in this direction.

The Committee has had one object always in view, that is, to give its best service in promoting the interests of the hospitals.

*Statement of Expenses of Purchasing Committee,
September 1, 1911 to August 31, 1912.*

	Per Year	Per Month
Salaries and wages	\$ 7,551.64	\$ 629.30
Traveling expenses	1,323.39	110.28
Laboratories	398.25	33.19
Advertising	534.25	44.52
Samples	235.69	19.64
Telegrams	72.70	6.06
Periodicals	66.00	5.50
Stationery and books	1,760.16	146.68
Telephone	244.83	20.40
Freight	12.51	1.04
Express	119.34	9.95
Postage	270.65	22.55
Experts	1,109.40	92.45
Ice	14.20	1.18
	<hr/>	<hr/>
	\$13,713.01	\$1,142.74
Less experts and equipment	1,745.15	145.42
	<hr/>	<hr/>
Total	\$11,967.86	\$ 997.32

The CHAIRMAN: The next thing in order is the report of the committee on "Revision of Rules and Regulations for the Guidance of Officers and Employees of the State Hospitals," to be read by Dr. Mabon.

Dr. MABON: Mr. Chairman, Ladies and Gentlemen.—The Committee on Rules and Regulations made a preliminary report at the former conference. Very few changes have been made since that time, but as it is the desire of the Commission and conference that all changes shall be read, I will do so.

The first change refers to a list of resident officers including the matron or principal of the training school.

The designation of the Commission in Lunacy has been changed to "State Hospital Commission."

In regard to the examination of patients, it was formerly required by law that an examination should be made within *five* days, but under the new law it is *ten*. The required change has been made.

Under the "Duties of Superintendents" the following has been inserted: "He shall not absent himself from the hospital for a period exceeding four days except on official business, subject to the approval of the State Hospital Commission."

Regarding resident officers, we have inserted the following: "Members of the medical staff shall be graduates of an incorporated medical college and shall constantly reside in the hospital except when otherwise authorized by the hospital superintendent."

We have changed the arrangement in regard to employees. The employees of the State hospitals shall be divided into four classes and shall be entitled to an annual vacation of 14 days.

First. Employees engaged in the immediate care of patients shall be granted 66 days leave of absence during the year, and the time shall be arranged by the hospital superintendent.

Second. Employees not directly engaged in the care of patients but whose duties cover all the days of the week shall be entitled to an annual vacation of 14 days.

Third. Those employed in the institution but who are not on duty evenings and Sundays shall be entitled to two weeks annually, but if in the judgment of the superintendent their services are needed on legal holidays and Sundays an equivalent of the time shall be given at the convenience of the hospital.

Fourth. Skilled artisans and those whose hours of labor are well defined, who are paid on account of their skill the commercial rate of wages, and who are not on duty evenings or Sundays, shall not be entitled to an annual vacation.

Dr. Mabon suggested a number of other changes to bring the rules and regulations up to date and to conform with the revisions of the law.

The CHAIRMAN: The report read by Dr. Mabon is now open for discussion.

Dr. MABON: In regard to employees—those who are engaged in the immediate care of patients shall be granted 66 days leave of absence during the year, including vacations, and the time shall be arranged by the hospital superintendents. The method of granting leave of absence varies in different institutions. In our hospital we are unable to give holidays to our employees and they have not been able to get as much time as this. In other institutions the time stated is a little less than that given employees, but on the average it is a little more than what we have been giving.

The CHAIRMAN: Does that include holidays?

Dr. MABON: Yes; there are about 10 or 11 holidays in the year, then a half day each week, which makes 26 days more, and every third Sunday would bring it up to about 61 or 62 days.

The CHAIRMAN: Would it not be well, doctor, if you described the method to be followed in arriving at this number of days? I think the conference would then better understand.

Dr. MABON: Under the present regulations, employees are entitled to a half day each week, every third Sunday, and 14 days vacation annually, and it has been the custom to give them a half holiday—half of the force going off duty in the morning and half in the after-

noon. There are 52 Sundays in a year; $\frac{1}{3}$ of 52 is about 17 or 18. The 14 days vacation, a half day each week and a half day of each of the 10 or 11 holidays in the year would make about 64 days leave of absence.

Dr. ARTHUR: That would be practically the same as every Sunday and the 14 days vacation.

Dr. MABON: Yes; it would be equivalent to that.

We have visiting on Sunday and can not permit the force to be away, but we give them other time for it.

The CHAIRMAN: Are there any further expressions of opinion? It practically amounts to an increase of about four days over the average number of days allowed for vacation. I think we would all be glad to know the superintendents' opinions about this and whether the proposed change is desirable or not.

Dr. PILGRIM: Considerable trouble has arisen in various hospitals from employees claiming a certain amount of their 14 days before they have served a full year. It has been our custom when they have served a half year to allow them seven days if they request it.

Dr. MABON: It is just as I said; the practice varies in each institution. In our hospital we do not allow a vacation at the end of six months.

The CHAIRMAN: It seems to me that Dr. Pilgrim's point is very well taken; that six months should elapse before any time should be given an employee. Otherwise, if an attendant is with you two weeks they might claim a certain number of hours vacation time due them. I think that would be entirely wrong and contrary to the end in view.

Dr. MABON: It seems to me if all the superintendents would decide on this question that the employees would not get away with that proposition. I think some definite time should be agreed upon in regard to the yearly vacation.

The CHAIRMAN: What do you say to this, Dr. Pilgrim?

Dr. PILGRIM: That no more annual vacations shall be available until the person shall have served the six months.

Motion was made by Dr. Pilgrim that no part of the annual vacation of 14 days shall be allowed until the employee shall have served six months.

Motion was carried.

Dr. MABON: I propose that the second paragraph of this rule be changed to meet the views of the conference. That is, employees not directly engaged in the care of patients but whose duties cover all the days of the week, and employees engaged in clerical services shall be entitled to an annual vacation of 14 days.

Dr. HOWARD: Under the old rule, doctor, a domestic was not allowed a half day, and considerable bitterness arose in our section, one of the lady members of the board of managers claiming that it forced the domestics out on Saturday evening to do their shopping,

and she wanted to know whether that would be avoided in the new wording of this rule.

Dr. MABON: They get 66 days the same as the attendants. The lady of the house can give them a half day up to that amount. Employees in the service of the hospital, who live in the institution shall be entitled to two weeks annual vacation and legal holidays, but in the judgment of the superintendent, an equivalent time may be given them at the convenience of the hospital.

The CHAIRMAN: You mean that they can have no summer half holidays?

Dr. HOWARD: Any scheme adopted by the conference which forbids an employee a Saturday half holiday during the summer months is going to meet with very bitter contention. It is the custom of all important business concerns to allow during the summer a Saturday afternoon off and, if Saturday is not possible, some other day is given during the week. If such a custom is to be established throughout the State, then I would like to voice a word of caution against our making a rule which would make it impossible for us to join with the other employers in the community in this relaxation for the employees.

The CHAIRMAN: Then we are to understand that to the limitation of 66 days, eight or nine days more are to be added by reason of that number resulting from the Saturday half holidays, during the summer. I would like to ask if Saturday afternoon is considered a legal holiday. It has been ruled, I understand, Dr. Howard, that Saturday afternoons are not extended to the State hospitals.

Dr. PILGRIM: Does not the clause limiting the number of days to 66, protect us?

Dr. MABON: We have spent a good deal of time discussing this thing.

Dr. HOWARD: Is there anybody now who does not get a vacation?

Dr. MABON: All employees in our institution get a vacation. Skilled artisans and those whose hours of labor are well defined, who are paid for their skill and who are not engaged evenings and Sundays, shall not be entitled to an annual vacation.

Dr. PILGRIM: It was our belief at the time we went over these rules that the paragraph regarding skilled artisans applied to those who were employed during the day for temporary periods. Now, mechanics employed by the month do not, as Dr. Mabon said, get the wages ordinarily paid outside and I think this paragraph should apply only to those from outside, who come for temporary periods and work only a short time. They are not entitled to anything beyond the wages they get.

A general discussion was had about the law as to whether employees are entitled to fourteen days.

Dr. PILGRIM made a motion that temporary employees shall not be entitled to vacation allowances.

Motion was carried.

Dr. MABON. An additional rule has been made regarding the employees' use of the telephone. The State hospitals' telephones shall be used only for official business; the general use of the lines can not be permitted. Important messages may be left with the operator who will transmit them. One desiring to use the telephone must make known the nature of the message before the connection is made.

Another rule has been added—that exemptions from attendance at entertainments and religious services will not be granted to those on duty.

To the rule in regard to cooks, we have added—"they shall receipt for all supplies received by the storekeeper, etc."

The CHAIRMAN: The law provides that the by-laws and regulations of State hospitals must be approved by the conference and the Commission. Are you prepared to vote in regard to the adoption of the suggested changes?

The report was accepted and approved by the conference.

The next is a paper by Mr. Homer Folks, Secretary of the State Charities' Aid Association on "Psychopathic Hospitals, Dispensary Treatment, and After-care of the Insane." Owing to the inability of Mr. Folks to be present, his paper will be read by Mr. E. S. Elwood, Assistant Secretary of the State Charities' Aid Association.

"The State Hospitals at the Parting of the Ways." By HOMER FOLKS, Secretary of the State Charities' Aid Association.

That I may not be misunderstood in what I shall say later in this paper, I should like to emphasize at the outset the fact that the State hospitals for the insane are entitled to a very high degree of public confidence. I have felt it a great honor to be for nearly twenty years the executive secretary of an organization which had so large a part in the establishment of the State care of the insane. The farsightedness and statesmanship of those who were responsible for framing that policy and pushing it to adoption has more and more commanded my admiration as the years have passed. The high degree of success which has attended the development of the State care system is due also in large part to the fact that the State Commission in Lunacy, now the State Hospital Commission, has included in its membership from the beginning to the present, men not only of high character, but of exceptional constructive capacity, and to the further fact that the list of superintendents of State hospitals has included and includes men who stand in the first rank, both professionally and as organizers and administrators. Among the numerous departments of government of the State of New York, nearly fifty in number I am told, there are very few which equal the State Hospital Commission in technical efficiency and in the wise and truly economical expenditure of the State's funds.

Nevertheless, I am convinced that this admirable system of State hospitals for the subjects of mental disease stands to-day at a parting

of the ways. No glaring signboard calls attention to this fact, nor points to the destinations to be reached by the choice of different routes. A close study of the signs of the times, however, convinces me that we are at a parting of the ways, and that although the divergence at the moment may seem slight, the different paths lead to very different destinations. On the one hand, in my opinion, lies an increasing satisfaction with the smooth workings of the hospital administration, an increasing development of traditionalism, and an increasing aloofness from the medical profession and the community, arriving first at easy self-complacency, impatient of change and development, and finally, at some more or less sudden or serious breakup, when traditionalism and routine have done their perfect work, and downright corruption and inefficiency have hidden behind them. The other path leads to increasingly close relations between the State hospitals and the communities in which they are, increased popular knowledge of, and popular confidence in them, increased service on the part of the State hospitals to a wider range of community needs, increasingly valuable contributions to the development of this particular portion of medical science; in short, to a continuing adjustment of the State hospitals to changing social conditions, and constantly greater service to the people of the State.

I do not believe this is an overstatement of the case. My conception of the origin and nature of the choice which is forced upon the State hospital system, and of the results which will follow its decision, is in brief as follows:

The energies of those connected with the management of the State hospitals may be said roughly to have been fully occupied during the first decade of State care (1890-1900) with the completion of the general framework of the system, with bringing the great metropolitan hospitals into the system, and with establishing at least in statutory form, the outlines of a co-ordinated and organized State system. This accomplished, the next decade may be said to have been devoted to developing a smooth and efficient operation of all of the State hospitals under conditions established by the new system. The State hospitals are very large institutions. To administer them smoothly, efficiently and economically is in itself a large undertaking. In my opinion this has been accomplished.

Meantime, however, during these twenty years important changes have taken place, and continue in all lines of scientific research, and nowhere, probably, have these changes been more fundamental and far-reaching than in medicine. Our conception of the essential nature of many diseases has wholly changed. Methods of treatment in many respects have been revolutionized. Our conceptions of the causes of disease have probably changed most of all. We have traced relations of cause and effect between events oftentimes far distant in point of time in the history of the individual. We have come more and more to see that in the daily habits, the daily surroundings in the

home and in the place of employment, the nature of one's employment, and the nature of one's recreation or the absence of recreation—among these factors are the origins and sources of the ailments which fill hospitals of all kinds, and reduce the average of human life to less than half the allotted four score years. The field of mental disease is not exempt from the application of these newer lines of thought, both in the field of strictly medical science and in the field of social research. For instance, the causal relation between syphilis and paresis has been generally accepted, and, wonderful to relate, apparently the remedy has been found which can draw the sting of this disease. Do any of us appreciate how great a change in the State hospitals will be brought about if Salvarsan proves to be what it appears to be, and if its use by those affected with syphilis becomes general? The direct relation between alcohol and certain types of insanity appears to be much more clearly established to-day than before. If less sweeping claims are made than formerly was the case, they are made on a much sounder basis and as the result of thoroughly scientific inquiries. The re-discovery of Mendel's experiments in heredity, and the extraordinary things that are being done by those who are now following up that line of research, promise to give us in the near future a certain and stable basis for a definite knowledge of the relation of heredity to mental disease.

Not only in medicine, but in law also, profound changes have occurred and are occurring. The community begins to see clearly that personal liberty, though achieved through centuries of effort and of sacrifice, must not stand in the way of the public welfare when the segregation of the notoriously unfit and incompetent is concerned. A commitment to a State hospital for the insane, from having been regarded as closely related to a commitment to a penal institution, is now seen to be much more closely related to a commitment to a hospital for communicable diseases. The entire statutory provision relating to the commitment of the insane abounds with complexities based upon an earlier conception of insanity, which emphasized the finality of commitment, and underestimated the importance of the open door for the discharge of the cured patients; which over-emphasized the possible danger of the locking up of one or more hypothetically sane persons, and under-emphasized the danger of failing to secure prompt and early treatment for thousands of the insane.

What are some of the more specific applications to the State hospital field of recent developments in medicine, in social research, and in law? Nearly all of them can be summed up, I think, in the extension of the field of work of the State hospitals into the communities in which they serve, and, as to the individual patient, the extension of professional care and treatment before and after the period requiring actual hospital detention. If we are no longer to care for the alleged insane in jails and poorhouses, we must care for them in hos-

pital wards, and, if in hospital wards, there must be physicians, expert or becoming expert in the treatment of mental disease. The shortcomings of a very large part of the medical profession in recognizing the earlier symptoms of disease, tuberculosis as well as insanity, have been the despair of the social worker; but these conditions are changing with the establishment, in all the larger communities of the State, of tuberculosis hospitals and psychopathic wards for the insane. In connection with the hospital there is a department which for a decade or two has been the "yellow dog" of charity, hated by the medical profession generally as unfairly cutting into its income, lightly esteemed by the social worker for doing superficial and inconsequential work—the dispensary. With the newer conception of disease, however, and the recognition of its earlier origin and the possibility of its effective treatment in its earlier stages, the dispensary is coming into its own once more. By diminishing the number of patients to be treated in a given hour or day, by highly specializing its medical staff and requiring actual, and not merely nominal service, and above all by the employment of trained social workers to visit the homes of patients, the dispensary is rapidly coming to be a most important factor in the promotion of health in the community. There is no line in which the dispensary has a larger field than in mental disease, for there is perhaps no line in which the causes date farther back into the patient's history, and in which the environment and occupation to which he returns will count for so much in his subsequent course. We must, therefore, have not only psychopathic hospitals scattered throughout the State, but, even more important, perhaps, clinics for the free observation and treatment of mental disease. The clinic has the enormous advantage that while the families of the patients would hesitate long before sending them even to a psychopathic hospital, they would be quite willing, at a much earlier date, to seek advice and direction at a dispensary.

We need also to push much further the lines of inquiry that were begun by Dr. Adolf Meyer, in studying the incidence of insanity in the different cities and counties of the State, and in endeavoring to connect the rate, or amount of insanity of various kinds developed in particular localities, with the particular social, economic, municipal or housing conditions of those localities. You have no doubt noted that Dr. Hoffman, of the Prudential Life Insurance Company, in his recent study of suicides, has pointed out one of the cities of this State as having, with the exception of the small city of San Diego, California, the highest suicide rate of any city in the United States. It is perhaps no accident that this same locality has been referred to as having an exceptionally high insanity rate. A close study of conditions in this city, as relates to the social evil and other kindred matters is clearly indicated. In addition to the extension of actual medical observation of individual cases of mental disease, long before it becomes necessary to commit them to hospitals, the establishment

of psychopathic wards and suitable State supervision, the establishment of an effective system of after-care by which the parole system will become a reality and not a shadow, and the study of the relation of particular local conditions to the incidence of insanity, there are other important educational things to be done.

We have all been greatly interested recently in re-education. We have seen the victim of nervous disease in middle life again taught to walk, much as he was taught in infancy. We have seen the victim of mental disease re-educated in industry and in more or less normal habits. Interesting papers thereon have been written by State hospital physicians. It is quite as possible and quite as necessary to educate the community as it is to re-educate the individual. There is no subject as to which the community more urgently needs re-education, perhaps, than insanity. It needs re-education as to the causes of insanity, bringing home to the average individual the fact that it does not come down like lightning from heaven, striking whom it might, but that it grows out of individual habits long continued, and that even if inherited, it is still to a substantial degree under the control of the individual as to the time and nature of its manifestations. The community needs re-educating as to the possibility of diminishing the volume of insanity; it needs re-education as to the traditional stigma or disgrace supposed to be attached to mental disease; it needs re-educating in the fact that the great majority of insane are not raving, dangerous, violent persons; that State hospital physicians are much more anxious to have patients discharged than they are to have them committed, that kindness is the rule and brutality the exception in hospital wards. Now, this community re-education is entirely possible, but it requires conscious and continued effort, very expert direction, and very considerable means.

In a hasty survey of the field I would mention the following as possible lines of endeavor for each hospital in its own district including some activities already in operation at one or more State hospitals.

1. Secure the co-operation of the medical profession by:
 - a.* Having meetings of medical societies held at State hospitals.
 - b.* Having members of staff join medical societies, attend medical meetings, and read papers.
 - c.* Promoting the teaching of psychiatry in medical colleges.
 - d.* Encouraging the physician of every patient entering the hospital to come with his patient, to visit patient while in hospital, and to attend staff meetings when the case is presented. The physician might be given a copy of his patient's clinical record and be notified previous to the patient's discharge.
 - e.* Establishing clinics in the cities and towns in the district and sending hospital physicians to hold these clinics.

2. Co-operate with local physicians by
 - a.* Bringing to their attention the laws relating to the detention of the alleged insane.
 - b.* Promoting the establishment of psychopathic wards and proper places for reception and observation.
 - c.* Acting promptly whenever a case is received at the hospital from a jail, lockup, or other unsuitable place, and taking action to prevent a similar occurrence in the future.
3. Educate the patients by
 - a.* Explaining to them when possible the causes of their trouble and their share in its treatment.
 - b.* Warning those who return to their homes of the nature of their disease, the precautions necessary to prevent a relapse, and the danger of transmitting the hereditary types.
4. Educate the families of patients by
 - a.* Talking with those who visit a patient not only about the patient's condition and prospect of recovery, but also the cause of the trouble, and in hereditary types the earliest symptoms which might appear in other members of the family and the best methods of its prevention or control.
 - b.* Directing relatives very fully as to their treatment of a patient after the patient's discharge.
5. Interest the general public by
 - a.* Giving public lectures on mental hygiene.
 - b.* Securing newspaper notices of hospital matters of public interest and value.
 - c.* Encouraging visits to the hospital on the part of the general public, and taking advantage of their visits to enlighten them as to the causes and treatment of insanity.

To return now to my title "The Parting of the Ways:" The natural leaders in all this extension work, in the establishment of psychopathic hospitals and in their oversight; above all, in the establishment and maintenance of clinics, in the development of after-care, in the study of local conditions affecting the development of insanity, and in the constant education of the community in regard to mental disease and its treatment—the natural leaders in all these lines are the State Hospital Commission and the superintendents and other officials of the State hospitals. "They are living with the subject constantly; they, one might almost say they alone, see it in all its phases, know their patients over a long period of time, and at least have an opportunity to study the subject in all its bearings. Serious as are their responsibilities in the smooth and efficient operations of the State hospitals, I am firmly convinced that it is absolutely essential that they add thereto the after participation and direction of these newer extension movements. It is vital, in my judgment, to the right development of the State hospitals themselves. The parting

of the ways is the question as to whether or not you, as superintendents and commissioners, will interpret your duties in a large way rather than in a small way; will regard yourselves as the natural leaders in all that is pertaining to the earlier recognition and effective treatment of mental disease from start to finish and will endeavor to apply your wide experience and a fair share of your resources to all portions of this field. The work is going to be done. Clinics, dispensaries, after-care, and education in mental hygiene are already here on a small scale, and are coming rapidly on a large scale. If you do not lead, others will; others less qualified by experience, by intimate knowledge of the subject, less able to keep in touch with all the developments from year to year in this particular field of medical science. It would, in my judgment, be a calamity if the State hospitals regarded themselves strictly and only as hospitals, and as charged only with the duties of hospital management, giving little thought as to whence the patients come or whither they go. It would be an inestimable boon, if in much larger degree than at present, following out through their logical conclusions several promising beginnings, the State hospitals in general regarded themselves as the servants of the public in the wide range of interests directly affecting the origin, development, recognition, treatment, and ultimately the prevention of mental disease.

The CHAIRMAN: Is there any discussion of Mr. Folks' paper?

Commissioner BISSELL: I do not gather from the last subject in Mr. Folks' paper just what he wants us to do. I agree with him fully that after-care is one of the most important questions we should consider, and that we should also give publicity to the workings of this department so that the people generally will understand what the State Hospital Commission and the superintendents working with it are doing. The fact is that the work of this great department is very little known. The taxpayers ought to be specially interested in this work. I do not understand what it is that Mr. Folks thinks in this very well written paper that we ought to do. He thinks that we should have clinics. The Commission extends an opportunity to and requires all the physicians in the service to take regular courses at the Psychiatric Institute. I would like to have some one who understands the paper better than I, to offer some suggestions.

Mr. ELWOOD: In regard to the establishment of clinics in the different State hospital districts, Mr. Folks has in mind the establishment of out-patient departments or mental clinics run by State hospital physicians for the benefit of discharged patients, patients on parole, or individuals suffering from mental disease in the incipient stage, who might wish to apply for such advice as the hospital might give them. I am certain that Mr. Folks does not recommend the establishment of psychiatric institutes or of scientific clinics in other parts of the State. I believe that he outlined a general programme thinking that the officials of the institutions would go ahead in leading

and directing the education of the people of their districts; in showing them the work which the hospitals are doing, in explaining the nature of mental diseases and educating them as to the cause of mental diseases and the possibility of its prevention.

Dr. MABON: I do not believe that the State hospitals have been at all backward in feeling this need. We have read these medical papers and have discussed the matter. I think that Mr. Folks may have had in mind the establishment of clinics in large cities as well as in small cities—the establishment of clinics where the State hospital physicians can give part of their time to the studying of cases. I have had a talk with Mr. Folks and I think that he appreciates the fact that an ordinary dispensary does not afford proper facilities for a mental examination. His idea is to establish a clinic on the East Side in New York where an hour may be given if necessary to each patient. I think we get closer to the community by doing these things. He also in my talk with him felt that we should have more in the way of field workers and I believe that he is right in that respect, but I wish that he had been more specific in his statement to-day. I believe there is a large opportunity for field workers in connection with the study of the problems with which we deal at all times.

Dr. RUSSELL: I do not know whether I can interpret all that Mr. Folks had in mind. I had no idea what he was going to present, but I can imagine that he had in mind a larger programme than one involving the State hospitals alone. I do not think that he undertook to frame the programme. After all, the essential point in the whole problem of the care of the insane stripped of all the machinery, is the relation of physician to patient—the individual physician and the individual patient.

In regard to his reference to parole, every hospital physician knows that one of the most difficult things is to get the patient out of the hospital right, and if an improvement in this is to be made, it must be by means of co-operation by some outside agencies with the hospitals. I know that the State hospitals are often obliged to send the patient home when home is frequently the very last place to which he should go. When patients are sent out on parole, some effort is often needed to get them properly adjusted to outside life and activities. The problem is one of certain types of personalities and certain conditions under which they live which cause them to go to the hospital, and when they go out again, they and their environment must be readjusted or they soon go wrong again.

Dr. PILGRIM: My understanding of this paper was that Mr. Folks believes a great deal of good can be done both by previous treatment and after-care, and I heartily agree with him. I think that in every hospital for the insane there should be competent field workers to investigate the conditions and surroundings of patients previous to coming to the institution, which, I think, is just as important as investigating the conditions after they leave us.

The next suggestion of his is rather difficult to carry out, except in the larger city hospitals—that is out-patient treatment.

We all encourage the out-patient system of treatment in a modified form. Scarcely a week goes by at Poughkeepsie that some one does not come to us for advice in regard to commitment or home treatment.

In regard to the question of parole, I think there lies therein a great opportunity to educate the community. Only a short time ago, I received a communication from a philanthropic woman in Brooklyn suggesting that a patient should never have parole or be discharged unless absolutely cured; that parole was a very dangerous thing because when an unrecovered patient went home he was apt to be a danger to the community in various ways, and in fact, that when once committed, a patient should never be released, except upon a certificate of complete recovery. Of course, no physician would agree with such a ridiculous doctrine.

Mr. BISSELL: I did not intend by anything I said, to reflect on the paper which Mr. Folks sent here—that is, as to the broad and splendid treatment of the principles, because we all agree with these principles, agree with them thoroughly. What I was trying to learn was the practical side of the question. If we are going to spend the State's money we want to spend it in the right direction. We all believe in exercising great care in the treatment of the patient on commitment. As to after-care, I had become interested as other commissioners had, in the work that was being done down town in the city of New York by Mr. Folks and his organization. We have continued it because they did not want to carry it any longer. But what I want to get down to is the practical thing we can do. Can we establish these agencies for after-care all over the State, and employ agents, women—perhaps men too, to watch patients after they are paroled and help them? And if we are going to ask the legislature for an appropriation, to what extent can we carry the work? That is what I would like to have discussed.

Dr. PILGRIM: That is the very point I think we ought to take up. I think that it should not be confined to New York; I think that in rural hospitals much more good could be accomplished than in larger cities. That is what I would advocate above all things else, to start the work and have it done in all the hospitals of the State.

Dr. MABON: I feel that there is something which the outside agencies can do also. I think we should have the support of the outside agencies in getting sufficient money and in giving them the proper accommodations. I do not think there is a greater evil to-day than the overcrowded condition of the State institutions at the present time. I think we should have the assistance of the charity associations and many of those working in philanthropy; and I make the motion that a committee be appointed to consider Mr. Folks' paper and to report at the next conference what measures the Com-

mission and hospitals can undertake to further the social service work of the hospitals.

The motion was carried, and a committee consisting of Drs. Elliott, Smith, Ashley, Arthur, Palmer, Wolcott, and Mrs. Werner, was appointed.

Dr. HURD: I think I might say a word in line with Mr. Bissell's suggestion and at the same time not depart too far from the subject matter of the motion which Dr. Mabon made. As to the query what can be done that is practical, you have heard through Dr. Pilgrim and Dr. Mabon some branches to which this work might lead; but for a practical application, I can tell you that our special object in asking here Dr. Meyer, president of the board of managers of the new Municipal Hospital, and the fellow members of the board, was that we might get from them some expression of opinion or that they might receive from us some ideas, on the subject of the care of the insane previous to commitment, which would have fruit in the erection and planning of the new Municipal Hospital in Buffalo. That is one practical thing which we have hoped for and which can be done if we can only arouse a sufficiently warm and interested sentiment. As it is now, patients who are to be sent to us are apprehended and taken to the detention ward at the police station. Some years ago conditions were much worse; even now they are contrary to law—and the detention ward is in a building where it should not be, yet the actual surroundings of the patients awaiting examination are an improvement over what they were, and it has been tolerated because no other place has been maintained. The general hospital should take this up and should make provision for cases pending commitment. Many of them are not able to take contagious diseases and all of them are not able to take mental diseases, but now that we are going to build a new municipal hospital, we want the co-operation of the board of managers of this new hospital in providing adequate, ample and proper accommodations for acute cases of insanity and in many cases, provision for inebriates, and drug habitués. It is true that voluntary admission in a hospital like this and in cities where there are State hospitals helps a great deal.

Provision should be made for the acute cases of inebriety; and in the country a colony should be maintained for the treatment of the chronic alcoholics. But it is one of the objects of this paper and of this meeting, to induce those who have charge of our new Municipal Hospital to make provision for both these classes.

The conference then went into executive session and discussed the question of promotion examinations.

A motion was made by Dr. Howard that a committee be appointed to confer with the committee on promotion examinations.

Motion was seconded and carried and a committee consisting of Dr. Pilgrim and Dr. Mabon was appointed.

At 1.00 P. M. the conference took a recess till 2.00 P. M.

AFTERNOON SESSION.

At 3.00 P. M. the meeting was called to order by the chairman.

The CHAIRMAN: I would request that the privileges of the conference be extended to Mr. J. J. Magilton, secretary of the Retirement Board, State Hospital Employees, who is very familiar with work of that sort, and who I think will be a great help to us in regard to the detail questions that arise in connection with that work.

The question now comes up in regard to the retirement of medical officers. Should a retirement fund be established for medical officers and if so, should that retirement fund be organized in connection with that already established for employees, or separate?

It was discussed somewhat informally by the Commission in Albany a short time ago and a committee consisting of Drs. Hurd, Mabon, Ashley, Ryon and Harris was appointed.

We should be pleased to hear from Dr. Hurd.

Dr. HURD: What I have to report is exceedingly brief. We were appointed by the State Hospital Commission only last Wednesday. There was a discussion on the question of establishing a retirement fund for officers and the consensus of opinion was that there should be a retirement fund for officers as was originally contemplated. There seemed to be no reason for spending time on the discussion as to whether it was just or proper because we are all agreed that medical officers who spend twenty-five years in the service and who are willing to make up the fund themselves without cost to the State should have the privilege of doing so. Then came the question as to the success of the present fund—which apparently is going to be a financial success—and as to whether it would be advisable or possible to attempt an amendment to the present law to include officers,—to which there might be some objection, mostly I think on the part of employees, or whether we should have a new law and be independent.

It must be remembered that the retirement fund law was originally written to include officers and employees and it failed evidently because of the opposition on the part of some of the younger members on the respective staffs throughout the State.

I would suggest that as an outline for discussion—first, to learn if any one feels that there should not be a retirement fund; secondly, to discuss whether it would be worth while to attempt to amend the present law, or frame a new one for officers only.

Dr. MACY: I merely wish to remind the conference that when this matter came up before, I made a suggestion that it be referred back to the superintendents to obtain an expression of their views on the question. Had that been done at that time I think we might have been able to reach some basis that would be acceptable to all. It was based on the selfishness of a few individuals as far as I understood it, and they took the position that they did not expect to remain a great length of time in the service. I told them at that time that the class of officers in the State service who wanted to continue in the

service for any length of time in my opinion were those who came into the service to remain and make it a vocation, and I think that if this matter came up for discussion it would need to be very seriously considered. It seems to me that we need the consideration of all the superintendents before we go very far.

The CHAIRMAN: Are there any further expressions of opinion as to whether or not it is desired to have a retirement fund for officers?

Dr. ELLIOTT: I do not think this question can be settled without considering the elements which enter into it. As to whether there should be a retirement fund for officers will depend on what basis it is established. The number of officers in the service is comparatively small and I doubt whether it is feasible to maintain such a fund distinct from that of the employees of the service as a whole. This must be taken into consideration in deciding whether or not there should be a pension scheme for officers.

Dr. WAGNER: I would like to be recorded as being very strongly in favor of having a retirement fund if it can be incorporated with the fund already in existence. If not, then I would suggest that the question should be taken up as to whether it is feasible to have an independent fund.

Dr. HURD: I should like to ask if it would not meet with the approval of the conference if this committee should write to the different superintendents to find out the attitude of their different staffs so that we may know how many are objectors and what are the objections. Secondly, I would like to ask any of those superintendents who may be familiar with the facts what if any are the objections of the present beneficiaries to the service being united, and if their objections are such as could not be overcome.

At the request of Commissioner Bissell, Mr. Magilton, secretary of the Retirement Fund Board, reported on the workings of the Fund.

Dr. May then read an article on "The Retirement of Officers" which was followed by a report of the committee on legislation, read by Dr. Mabon; the recommendations contained therein were all accepted and approved by the conference.

Motion was made by Dr. Hurd that the conference should strongly urge the construction, in each large centre of population, where such does not exist, of a psychopathic ward for the care and observation of the alleged insane, preferably in connection with a general hospital.

The motion unanimously prevailed.

The report of the Training School Committee was submitted by Dr. Hurd.

REPORT OF THE TRAINING SCHOOL COMMITTEE.

To the Conference :

In place of the red cross, the Committee recommends for women the black velvet band for the caps now in use; and for men the green chevrons on the left arm.

The Training School Committee reports that the usual examinations for the senior and junior classes of the nurse training schools of the State hospitals were held May 14th and 15th respectively.

169 seniors took the examination, of whom 167 passed and two failed.

227 juniors took the examination, of whom 207 passed and 20 failed.

Respectfully submitted,

Committee { Dr. HOWARD,
Dr. HURD,
Dr. WAGNER.

There being no further business before the conference, on motion it was adjourned at 4.45 P. M.

MINUTES OF QUARTERLY CONFERENCE*

DECEMBER, 1912.

Minutes of the conference of State hospital superintendents and representatives with the State Hospital Commission, held at the Capitol in Albany, December 3, 1912.

Present—

Commissioners SANGER, MAY and PARKER.

Dr. AUGUST HOCH, Director of the Psychiatric Institute.

Dr. GEORGE B. CAMPBELL, Medical Director of the Bureau of Deportation.

Dr. WALTER G. RYON, Medical Inspector, State Hospital Commission.

Utica State Hospital, HAROLD L. PALMER, M. D., Medical Superintendent.

Willard State Hospital, ROBERT M. ELLIOTT, M. D., Medical Superintendent.

Middletown State Homeopathic Hospital, MAURICE C. ASHLEY, M. D., Medical Superintendent.

Buffalo State Hospital, ARTHUR W. HURD, M. D., Medical Superintendent.

Binghamton State Hospital, CHARLES G. WAGNER, M. D., Medical Superintendent.

St. Lawrence State Hospital, RICHARD H. HUTCHINGS, M. D., Medical Superintendent.

Rochester State Hospital, EUGENE H. HOWARD, M. D., Medical Superintendent.

Gowanda State Homeopathic Hospital, DANIEL H. ARTHUR, M. D., Medical Superintendent.

Kings Park State Hospital, WM. AUSTIN MACY, M. D., Medical Superintendent.

Long Island State Hospital, ELBERT M. SOMERS, M. D., Medical Superintendent.

Manhattan State Hospital, WILLIAM MABON, M. D., Medical Superintendent.

Central Islip State Hospital, GEORGE A. SMITH, M. D., Medical Superintendent.

Mohansic State Hospital, ISHAM G. HARRIS, M. D., Medical Superintendent.

Matteawan State Hospital, JOHN W. RUSSELL, M. D., Medical Superintendent.

*NOTE: On account of lack of space in this issue the proceedings of the conference are given in condensed form.

- Dannemora State Hospital, CHARLES H. NORTH, M. D., Medical Superintendent.
- Marshall Sanitarium, C. J. PATTERSON, M. D., Physician in Charge.
- Mr. ABRAM S. STOTHOFF, Manager, Willard State Hospital.
- Mr. JERVIS LANGDON, Manager, Binghamton State Hospital.
- Dr. JOHN J. ROBINSON, Manager, St. Lawrence State Hospital.
- Dr. ALBERT J. FRANTZ, Manager, Gowanda State Homeopathic Hospital.
- Dr. GUSTAV SCHÖLER and Dr. WHITMAN V. WHITE, Managers, Manhattan State Hospital.
- Mr. ARTHUR O. SHERMAN, Manager, Mohansic State Hospital.
- Dr. SPENCER L. DAWES, Special Commissioner on Alien Insane, Albany.
- Mr. J. F. CONNOR, Deputy Attorney General.
- Mr. J. J. MAGILTON, Secretary, Retirement Board, State Hospital Employees.
- Mr. EDWARD D. SPENCER, Inspector of Supplies, State Hospital Commission.

Commissioner SANGER in the chair.

The conference was called to order at 10.30 A. M. by Chairman Sanger of the State Hospital Commission.

Dr. Mabon, chairman of the committee on proposed amendments to the Insanity Law, submitted the report of that committee recommending the following changes in the law, all of which were approved by the conference.

To add to the qualifications of the Medical Commissioner the requirement that he shall have served at least five years in a New York State hospital for the insane, and shall have filled the position of either superintendent or first assistant physician in such hospital.

To include in the paragraph of the law relating to the appointment of the Medical Inspector the words, "subject to the State civil service regulations."

To authorize the Commission to "cause to be made" an examination of all the records and methods of administration of institutions for the insane, etc.

To strike from the law the provisions allowing the appointment of "lay" deputies on the Bureau of Deportation.

To recommend that the salaries of the Medical Examiner of the Bureau of Deportation and of the Medical Inspector of the Commission be made \$6,000 per annum.

To strike out the word "lunacy" and substitute the word "insanity" wherever it occurs in the law.

To strike out the words "for compensation or hire" in two places in Section 59 of the Insanity Law.

To add principal of training school and assistant steward to the list of officers.

The various changes proposed, as mentioned above, were freely discussed by the conference.

Deputy Attorney General Connor appeared before the conference and spoke as follows regarding desirable changes in the Insanity Law:

Judge CONNOR: Gentlemen—I have not given this subject very much consideration because I did not know until a few days ago that you were to have this meeting. My ideas were not along the lines of making any changes in the substantive law, but rather to correct certain defects in the existing law. The Attorney General's office is called upon frequently to give opinions construing certain sections of the Insanity Law and we find considerable confusion. The question of citizenship has already been brought up. That question can be best settled by adding a section defining citizenship. I understand that under a recent amendment to Section 40, it is provided that citizens only shall be admitted to State hospitals, so it is very proper to define what a citizen is.

It has occurred to me that there might be an amendment to the Insanity Law which would make more specific the duty of the State to take care of the insane who are not citizens, from the standpoint of its attitude in protecting the public. As I understand the law at the present time, there is no obligation on the part of the State to receive any one except a citizen. There frequently arise of course cases of non-residents and aliens who are violently insane, who must be confined. While it has been the policy to receive these patients, still it is not compulsory or even permissive. I suggest there should be a provision in the law whereby other than citizens can be admitted with the consent of the Commission.

There is one portion of the law which seems to cause a great deal of confusion. I think it is Section 87 in relation to the duties of health officers. It is not a question of very material importance, because it only arises when there is a dispute between the health officer and the poor officer as to who gets the fees. It seems to me, however, that the purpose of the act is, that the health officer should have exclusive jurisdiction. I presume the health officers are considered better fitted. That confusion should be remedied by an amendment. Section 82 provides specifically that certain poor officials may make an application to have a person committed and because of that provision of Section 82, the Attorney General was bound to hold that while it was the duty of the poor official to report to the health officer, still he might go ahead himself and make the application.

The subject of letting contracts has had considerable consideration. In looking over Section 65, I find no absolute provision which requires that the contracts be advertised and let to the lowest bidder, but the section is so worded that you may safely infer this to be the intention. There is no general provision of the statute requiring advertisements for bids and my suggestion would be that Section 65 be made a little more plain and that it should be stated in so many words that original

contracts be advertised and be awarded to the lowest bidder. I would also suggest that in Section 65 there be placed a clause stating that each contract shall contain a provision that if the contract is not completed at a specified time, the contract might, at the option of the State Hospital Commission, be canceled.

Dr. MABON: Would you say forthwith?

Judge CONNOR: No; I don't think so. I do not think it would be well to have the contract provide that it should be canceled forthwith upon failure to complete, but I think there should be a provision that the Commission might cancel. I think there should be a provision in the law providing that upon the cancellation, the State Hospital Commission might sublet without readvertising. While we have held that the Commission might sublet without readvertising, still there is some confusion about it unless it is in the law.

There has also been some question as to whether or not under Section 85 of the Insanity Law, there is a liability against the estate of an incompetent person for his maintenance, at least whether there is a liability until after the State places him upon the reimbursing list, and that condition arose because of the decision of a case which came up in the County of Albany where a person was committed to the almshouse of the County of Albany and supported at public expense and later was found to have property. Notwithstanding that fact, the Court of Appeals held that there was no liability against this person to reimburse the county. In other words, they held that where the State, or any department of the State, assumes to support a person as a public charge, there is no implied contract, to reimburse for the money thus expended. Quite frequently cases arise where a patient has been supported as a public charge and some one dies and leaves the patient some money; it is very appropriate to take that money to settle the past due account. In almost every case we have obtained payment of the past due account. In almost every case we have obtained payment of the past due account to the extent of six years, but there has always been the question whether we could recover it. As a matter of fact, I think the attorney of the Kings Park State Hospital as long as sixteen years ago brought that matter to the attention of the Commission and suggested that the Insanity Law be amended. I would be glad to furnish that correspondence to the committee if they desire to have it. The estate of an incompetent patient is liable from the time the State Hospital Commission places the patient upon the reimbursing list, but there is a question whether the estate is liable prior to that time. That could be remedied by an amendment to the Insanity Law. The objection has been made, which perhaps has some weight, that such an amendment to the Insanity Law would be an admission that we could not recover. But the time will come when some one is going to try this question out and the State may be defeated on the proposition.

On the question of the retirement act, the Attorney General has

written two or three opinions and we have found that that act was more confusing than any act of the legislature ever brought to our attention. It would have been very easy for us to construe the act to include almost every gentleman in this room within its provisions. I understand it was the intention of the people who got it up to include employees only. My suggestion is that the opinion of the Attorney General be taken into consideration and that that act should be amended so that it should be specific. It should be decided just what persons are intended to come within the act and stated in plain English language. In making any change to the retirement act, my suggestion would be that a reference be made to the provisions of the Insanity Law, that is, it would be very easy to say that all the persons included within the schedules mentioned in Section 50 come within the provisions of the act; at least the act should be amended so as to be made specific, because if it is to be construed in court, we don't know what will happen to it.

The conference approved of the insertion in the Insanity Law of a section defining citizenship.

The suggestion that the State assume an obligation to admit and care for aliens was rejected by the conference.

The proposed changes in regard to making the duties of health officers more clear, to secure a stricter adherence to contracts, and making the estate of an incompetent liable for his care and treatment, were approved by the conference.

The conference voted to refer these matters to the committee on proposed legislation with instructions to include them in the draft of the revised law.

A discussion was had regarding the operations of the State hospital employees' retirement law and Mr. Magilton, Secretary of the Retirement Board, appeared before the conference and explained its workings, as well as certain changes in the law which he considers desirable.

Questions for Consideration in the Matter of Amendments to Article 5 of the Insanity Law providing for the Retirement of State Hospital Employees.

Section 110. The Attorney General has ruled that officers are not included in the provisions of this section. This question arises as a result of the use of the word salaries through various sections of the Act; also the use of the word office in Section 116. The advisability of making amendments to the law for the purpose of including the officers should be discussed at this time. The large amount of contributions received, the amount of time devoted to computing deductions based on *leaves of absence* without pay and *deductions* from *sickness* would suggest the advisability of omitting the latter two sources of contribution from consideration as being unnecessary. The sentence "But no salaries for the administration of the fund are to be paid from such fund" should be omitted from Section 1 as conflicting with Sec-

tion 122. There is no other fund available for the purpose of administration, and this expense should be paid from contributions to the retirement fund. If officers are not to be included in the provisions of this Act the word "officers" should be defined. The terms "leave of absence" and "lost time" should also be defined in law. The Board has made a ruling that the minimum length of time for which deductions shall be made for maintenance or leaves of absence shall be twenty-four hours. It would perhaps be well to specify this in the law. The question of maintenance during the time when the employee is absent on leave should be discussed and clearly set forth in the law. This is covered by the answer to question 7 in the Board's set of questions and answers. If deductions are to be made for lost time or leave of absence the law should specify whether or not these deductions are to be made from the wages of non-participants. To avoid confusion the word "wages" should be substituted for the word "salaries" wherever used, unless officers are to be included.

Section 111. It has been suggested that retirement should be granted only after twenty-five consecutive years of service. Many employees leave the service on repeated occasions when opportunities for preferment are offered and only return to the service of the State when unable to obtain employment elsewhere. It is a question whether such services should be rewarded by pension. Very few other corporations grant pensions for any other than consecutive service. The question of designating an age limit for retirement in addition to the twenty-five years of service has been suggested for consideration. Some employees who have entered the service at an early age retire on a pension at the age of forty-five years, and in rare instances can retire at a still younger age for the purpose of securing employment from other sources while still drawing a pension for some time from the State, which thus loses the advantages of their years of experience. Theoretically, it is to be assumed that a pension is a reward for many years of service to those who have become incapacitated for further duty. The question of retiring after twenty-five years of service, providing the age of fifty years has been reached, is worthy of consideration. Some other age might be agreed upon as being more desirable. There should also be some definite understanding as to whether or not the Retirement Board can insist upon retirement after twenty-five years of service or whether it is optional. The Board should be authorized to enforce retirement in the case of employees who have served the requisite number of years and whose services are no longer satisfactory as the result of age or disability. The amount of the contributions at the present time are such that there seems to be no necessity for including contributions obtained from the maintenance accounts of the hospitals. This only adds to the work of the institutions and is not necessary to insure the success of the fund. The words "or otherwise" should be omitted in Section 111 from line 19, and in such other Sections as they appear. The retirement of a

person who has not contributed a sufficient length of time to have paid in 50 per cent of his first year's annuity would seem unwarranted. The applicant should be retired for one-half of the salary or compensation received during the year preceding retirement and not during the year preceding the application for such retirement. It should be stipulated in the law that no further payments are required after contributions are made for twenty-five full years.

Section 112. The words "maintenance and or otherwise" should be struck out here as in other sections. Employees who have served twenty-five years but who do not desire to retire should be required to make no further contributions but should not receive a pension until the time of their actual retirement from active service. There are a few instances of employees remaining in the service in the capacity of officers after having served twenty-five years as employees.

Section 113. The question of whether retirement should be granted to employees on account of disability caused by injury, independently of length of service, should be considered. Employees who are retired on account of disability should be kept under supervision by the Retirement Board and the law should provide for their return to active duty if the physical or mental condition which necessitated their retirement should improve at some future time to such a degree as to warrant it.

Section 114. The sentence "Except the period of time during which any employee is exempt from the provisions of this Act shall not be considered in computing his or her time of service" is indefinite and should be omitted, or the meaning intended clearly defined.

Section 115. It has been suggested that the percentage of contribution should be based upon the amount of wages received rather than on the length of service. If certain percentage deductions could be made based purely on the amount of wages received a great deal of work could be avoided on the part of those who make out the payrolls at the hospitals. It is practically impossible for the length of service and the corresponding deductions based thereon to be verified in the Comptroller's office on the receipt of every payroll. Computations could be made instantly if based on the wages received. It is thought by many that maintenance should be left out of consideration in this as well as in all other Sections of the Act. It would seem that all employees who did not definitely notify the Board that they did not desire to participate, within the thirty days specified, and who have entered the service since the date when this law became operative, should be included as participants. The law should clearly specify that all deductions made should be based not upon the amount of wages allowed but on the amount actually received.

Section 116. It is a question whether contributions should be returned in the case of employees who leave the service.

Section 117. As constituted at present, Section 117 would seem to confer authority upon the Retirement Board to pass upon the question

of dismissals from the service, which is clearly in conflict with the sections of the Insanity Law delegating to the superintendents the power of making appointments and discharges. This is a power which should not be vested in the Retirement Board. It should only pass upon the amounts which are due in the case of dismissals and not upon the justness of the act itself.

Section 118. Section 118 should clearly specify what is meant by temporary employees. It is to be assumed that this term would include all persons employed under the designation of temporary employees as provided by Civil Service regulations and all employees paid from special fund estimates under legislative appropriations or from any other than the regular payrolls of the institution. In the case of employees who obtain an extended leave of absence the law should not require their wages, during that length of time, to be paid into the retirement fund. Contributions should not be made in the case of employees who are paid from special fund appropriations.

Section 119. The Retirement Board should include the Comptroller and medical and legal members of the State Hospital Commission.

Section 122. The expenses of administration of the funds should be authorized by this section and not restricted to expenditures made necessary in computing payments to be made under the annuity system. Employees who were in the service prior to the date upon which the retirement act went into effect should not be allowed the privilege of changing from the participating to the non-participating class. The requirement of the law relating to those who did not signify their desire of being exempted from the provisions of the act prior to the expiration of the thirty days specified by the law should be strictly complied with. The requirement that those who are employed subsequent to this enactment should participate, would seem to render it only fair that those who were participants when the law went into effect should remain so.

The conference voted to recommend that deductions based on leave of absence without pay and because of sickness be hereafter omitted from the contributions owing to the small amount this item returns, compared with the great amount and cost of the clerical work required to compute these items.

The conference recommended that the law be so changed as to make clear the right of the Retirement Board to pay from the fund the necessary expenses of administering it.

A number of other points connected with the Retirement Law, such as the interpretation of certain words or phrases, the fixing of an age limit, the desirability of securing actuarial advice, etc., were discussed in executive session and on motion all these questions were referred to the sub-committee of the committee on proposed legislation, with instructions to confer with the Retirement Board regarding them.

It was decided by the conference to change the title "superintendent of the training school" to "principal of the training school" in

order that no misunderstanding might arise by having two officials designated "superintendent" in one institution.

Dr. Hurd, as chairman of the committee on the retirement of officers, presented the report of that committee.

A full discussion regarding this was had in executive session and a number of modifications were suggested to the committee to be incorporated in the final draft of the bill.

A recess was then declared until three p. m.

AFTERNOON SESSION.

Dr. R. H. Hutchings, chairman of the Committee on Statistics and Forms, submitted the report of that committee.

Report of the Committee on Statistics and Forms, by Dr. R. H. HUTCHINGS, chairman of the committee.

Mr. Chairman and Gentlemen—Since the last conference three meetings have been held by this committee. The first, held at No. 1 Madison Avenue, New York City, on November 8, was attended by the following gentlemen upon the invitation of the committee, and to whom we desire to express our appreciation for valuable suggestions and criticisms: The Medical Member of the Commission, Dr. James V. May, Dr. William L. Russell, Dr. Thomas W. Salmon, Dr. C. Macfie Campbell, and Dr. Horatio M. Pollock, Statistician.

The committee has revised the book of instructions for the collection of statistical material, and a new edition will be printed and distributed to the several hospitals immediately. Besides a general revision of the text, that portion particularly relating to the grouping of the psychoses, has been revised by Dr. Kirby and Dr. Hoch and that portion relating to nativity and race has been revised along lines suggested by Dr. Salmon, in order to have it conform more fully with the United States Census and the Immigration Department customs.

The committee adopted and recommends for use in the several hospitals an outline for the study of alcoholic psychoses prepared by Dr. August Hoch, Director of the Psychiatric Institute, which is intended to unify the information obtained throughout the State in regard to alcoholic insanity, and which will be of material aid to the assistant physicians in preparing case histories of alcoholic patients. If this outline is followed in the several hospitals it will make it easy to collect statistical data relating to the alcohol question at some future time.

Some changes were made in the statistical cards, which will have the effect of simplifying them somewhat. Several captions found to be of no particular value have been omitted. The captions relating to "circumstances" have been changed from "poverty, comfort, affluence" to "dependent, marginal and comfortable." The captions "residence, street and number" have been omitted, since it has been found impracticable to utilize these for the reason that the majority of the poor patients in the large cities change their residence so frequently that

accurate conclusions can not be drawn regarding the existence of insanity in different portions of the larger cities.

The statistical data sheets in use in some institutions have been revised to make them uniform with changes in the cards.

The committee recommends that the institutions for the care of the criminal insane be requested to co-operate with the Commission by furnishing statistical information regarding these institutions.

The committee recommends that when a voluntary patient is discharged for the purpose of commitment the entry in the discharge book be made "Discharged for commitment", and not discharged "Unimproved", as is now the custom.

Tables answering in detail the following questions are recommended for publication in the forthcoming annual report of the State Hospital Commission :

Tables Nos. 1, 2 and 3. What has been the movement of patients in the several institutions in the State devoted to the care of the insane?

Table No. 4. How many patients have been admitted to the various classes of institutions for the insane in New York State annually since 1889? What has been the annual increase of patients? What has been the ratio of patients to population? Has the ratio of patients to population increased or decreased and how much?

Table No. 5. What have been the annual admissions to each class of institutions for the insane each year since 1897? What has been the ratio of total admissions to the general population of the State?

Table No. 6. Number of recoveries and deaths in the State hospitals, 1897-1912? How many recoveries and how many deaths have there been among the patients in the State hospitals each year since 1897? What has been the recovery rate each year? What has been the death rate each year?

Table No. 7. First admissions and readmissions—How many first admissions and how many readmissions were there in each of the State hospitals during the year?

Tables Nos. 8, 9 and 10. Relating to nativity—What was the nationality of the first admissions and of the readmissions during the year? What was the nationality of the parents of the first admissions and of the readmissions during the year?

Table No. 11. How long were the foreign born first admissions in this country before they were admitted to the State hospitals?

Table No. 12. Relating to citizenship—What was the citizenship of the first admissions and of the readmissions to each of the State hospitals?

Table No. 13. Historical summary of nativity of admissions—How many foreign born and how many native born patients have been admitted to the State hospitals each year since 1889?

Table No. 14. Psychoses and age groups—At what age were the patients suffering from the various mental disorders first admitted to the State hospitals?

Table No. 15. (New). Psychoses and race—What was the race of the patients of the various psychoses admitted to the State hospitals?

Table No. 16. (New). Psychoses and environment—How many of the patients of the various psychoses had their residence in certain designated cities and in rural districts?

Table No. 17. Psychoses and family history—What was the family history with respect to insanity and nervous diseases of the patients of the various psychoses?

Table No. 18. Alcohol and insanity—What were the habits of the patients of the various psychoses with respect to alcohol?

Table No. 19. Comparison of psychoses in the several State hospitals—What was the relative frequency of the various psychoses in each of the State hospitals? What was the rate of frequency of the various psychoses compared to the general population in the various hospital districts?

Table No. 20. Comparison of the psychoses of readmissions in the several State hospitals—What was the relative frequency of the various psychoses among readmissions in the several State hospitals?

Table No. 21. Discharges according to psychoses—How many patients of each of the various psychoses were discharged from the State hospitals and what was their mental status when discharged?

Table No. 22. Ages of patients at time of death—What were the ages of patients dying in the several State hospitals?

Table No. 23. Deaths and psychoses—What were the causes of death of the patients of the various psychoses in the State hospitals?

Table No. 24. Number of deaths of patients of the various psychoses—What was the relative frequency of death among patients of the various psychoses in the State hospitals?

Table No. 25. Average age at death and average time in hospital—What was the average age at death? What was the average time spent in hospitals for the insane by patients who died in the State hospitals?

Table No. 26. Residence of first admissions and of patients remaining under treatment—What was the distribution by counties of the patients first admitted to the hospitals during the year and of the patients under treatment in the hospitals, and what were the ratio of first admissions and of patients under treatment to the general population in each county?

It is recommended that the Statistician be provided with suitable cabinets for holding statistical cards, so that they may be readily accessible.

It is also recommended that the Statistician be provided with an assistant. A person sufficiently well qualified could doubtless be obtained from the Civil Service list of clerks.

After careful consideration of the blank forms now in use, the committee recommends that only those forms which are filed with the State Hospital Commission, or which are prescribed by statute, or recommended by the Audit Company of New York be made uniform; that all blank forms used for the convenience of internal administration be printed in the form most satisfactory to the several hospitals.

The various recommendations of the committee were discussed by the conference, particularly that relating to the retention of original copies of case histories at the hospital of first admission in the case of patients transferred to another institution. The majority of the conference expressed a belief that these case histories should be retained and only abstracts sent, and that the recent order of the Commission directing the transmission of all papers with the patient should be accordingly modified.

A general discussion was had concerning the method to be followed in reporting a voluntary case discharged for commitment.

The conference voted that the Commission be requested to prepare a pamphlet containing all its official orders so that these might be more readily accessible.

Dr. Hoch, as chairman of the committee on examinations, submitted the report of that committee. Mr. Hendricks, representing the State Civil Service Commission, was also present and took part in the discussion.

A very full discussion of the general question of examinations for positions in the State hospital medical service was had, with special reference to the relative weights to be assigned to written and oral examinations, and to the heading "personal fitness." The conference made recommendations to the committee and the State Civil Service Commission regarding these matters, and decided that the semi-annual reports of efficiency of each medical officer in the service, should be continued, with certain modifications.

The conference voted to request the superintendents of the Matteawan and Dannemora State hospitals to co-operate with the civil hospitals in furnishing the statistical cards for patients committed to their care.

A discussion was had regarding the redistricting of the State with reference to the Buffalo-Gowanda districts, the Utica-St. Lawrence districts, and the metropolitan districts. It was decided that Wyoming county, now temporarily assigned to the Rochester district, be returned to the Gowanda district as originally assigned, and that Erie county be placed in the Gowanda district as well as the Buffalo district. It was also decided that Onondaga county should be placed in the Utica district as well as the St. Lawrence district, so that patients from that county may be committed to either hospital. The matter of the Long Island districts was referred to Drs. Macy and Smith for adjustment and recommendation to the Commission.

The proposed bill amending the public health law to regulate the practice of nursing was discussed, particularly with reference to its possible effects on the State hospital training schools and their graduates. The matter was referred to the committee on proposed legislation.

On motion the chair was directed to appoint a committee to draft suitable resolutions on the resignation of Commissioner Bissell, and Dr. Ashley, Dr. Hurd and Dr. Wagner were appointed as such committee.

The conference then adjourned.

APPOINTMENT OF COMMISSIONER FRED H. PARKER.

Commissioner Fred H. Parker was born in Cortland county, May 11, 1862, and was appointed to the State Hospital Commission by Governor Dix on November 15, 1912, to succeed Colonel Wm. Cary Sanger, as lay member, Colonel Sanger having succeeded Mr. Herbert P. Bissell, resigned, as legal member during the remainder of the year. Mr. Parker was reappointed by Governor Sulzer on January 1, 1913, and his appointment was confirmed on the floor of the Senate on the same day. Mr. Parker was educated in Cortland and attended the State Normal School at that place. He was connected with the United States Indian Service in 1886 and from 1890 to 1898 was New York State bank examiner. In 1899 to 1907 Mr. Parker was connected with the Insurance Department in the capacity of examiner.

He took an active part in the organization of the Carnegie Trust Company in New York City, subsequently becoming its secretary and afterwards vice president, which position he resigned in September, 1908. Mr. Parker was appointed by Justice George H. Fitts of the Supreme Court of the State of New York as a member of the commission for the condemnation of land for a site for the Ashokan Reservoir, which will constitute an important part of the New York City water supply.

Mr. Parker is a brother of former Chief Justice Alton B. Parker of the Court of Appeals, who was nominated by the Democratic party as candidate for President of the United States in 1904.

His appointment is one which is gratifying to his many friends and will meet with the hearty approval of the department in general.

RESIGNATION OF COMMISSIONER SANGER.

Colonel William Cary Sanger of Sangerfield, New York, who was appointed a member of the Commission by Governor Hughes on February 17, 1910, presented his resignation to take effect on January 1, 1913.

After graduating from the Brooklyn Polytechnic in 1869, Colonel Sanger entered Harvard University from which he

was graduated in 1874. He received the degree of A. M. from Harvard in 1875, LL. B. from Columbia in 1879 and LL. D. from Hamilton College in 1902. He served as a member of the New York State Assembly from 1895 to 1897 and was a lieutenant colonel of the 203rd regiment, volunteer service of the United States, in the Spanish-American War. Colonel Sanger served as Assistant Secretary of War from 1901 to 1903 under Secretary Root. In 1906 he was appointed president of the delegation which represented this country at the international conference at Geneva for the purpose of revising the Treaty of 1866. He was also a delegate to the International Red Cross Conference in London in 1907. He has for some time been a trustee of Hamilton College and is the author of various publications of a literary and military nature.

Owing to illness of various members of his family and other circumstances which made it difficult for him to devote his time to the work of the Commission, Colonel Sanger tendered his resignation to Governor Dix during the latter part of 1912, and at the special request of the latter, continued on duty until the first of January, 1913.

During the three years of his service on the State Hospital Commission, Colonel Sanger has shown a devotion to the work which has been productive of results well known to all who are interested in the care of the insane. In the administration of the affairs of the Commission, of which he has been Chairman since April, 1912, Colonel Sanger has exercised a degree of judgment which has often averted difficulties which appeared to be almost unavoidable. It is a source of great regret to all connected with the hospital service and all who are working for the best interests of the insane, that Colonel Sanger has found it necessary, on account of his business obligations and personal affairs, to terminate a connection with the department which has been a source of congratulation to all who have been conversant with its history.

REVIEWS.

WILLIAM A. WHITE. "Outlines of Psychiatry."

The fourth edition of this work has recently been issued in the Monograph Series, No. 1, of Nervous and Mental Diseases. An interesting feature of the work is a discussion of the psychological questions involved in an understanding of psychiatry, in accordance with the modern conception of mental diseases. The general symptomatology of the psychoses is explained at a length unusual in ordinary publications on this subject and should be of great value to all who are interested in the study of insanity. Considerable space is devoted to a discussion of the paranoid states and their differentiation from genuine paranoia. The description of the pathology of general paresis is to be commended, together with the discussion of the laboratory methods used in the diagnosis of that disease. Attention is called to the psychoneuroses and the author devotes some space to a consideration of anxiety neuroses described by Freud. A very excellent feature of the book is the careful outline showing the methods of examination, both physical and mental, which should commend itself to persons who are not familiar with the procedures used in institutions. A new feature of this edition is a description of the Binet-Simon test which should prove quite useful. The work will be found of great value to medical officers connected with institutions, as well as to the profession generally.

M.

NEWS OF THE SERVICE DURING 1912.

CHANGES IN PERSONNEL OF THE MEDICAL STAFFS.

UTICA.

Dr. William Hale, Jr., a graduate of Amherst College, of the Medical School of Queens College, Kingston, Canada, and later a resident physician at Faxon Hospital, Utica, was appointed Medical Intern July 1, 1912.

WILLARD.

Dr. Walter G. Ryon, First Assistant Physician, was appointed Medical Inspector for the State Hospital Commission, January 17, 1912, to fill the vacancy left by the appointment of Dr. Elbert M. Somers as Superintendent of the Long Island State Hospital at Flatbush.

Dr. Thomas J. Currie, Second Assistant Physician, was promoted to First Assistant Physician in place of Dr. Walter G. Ryon, January 20, 1912.

Dr. Christopher Fletcher, Assistant Physician, was transferred to Buffalo State Hospital and promoted to the grade of Second Assistant May 1, 1912.

Dr. Chester Waterman, Assistant Physician at St. Lawrence State Hospital, was transferred to Willard State Hospital and promoted to the grade of Second Assistant May 1, 1912.

Dr. Mary H. Smith, Medical Intern, was promoted to Junior Assistant Physician May 11, 1912.

Dr. George H. Reeve was appointed Medical Intern June 12, 1912.

Dr. Wirt C. Groom was appointed Medical Intern July 15, 1912.

According to the new salary schedule, in effect July 1, 1912, Drs. Louis T. Waldo and J. Albert Pritchard were advanced from Assistant Physician to the grade of Senior Assistant. Dr. Ralph S. Pettibone and Dr. Mary H. Smith were advanced from Junior Assistant to Assistant Physician.

Dr. William A. Smith, Assistant Physician, resigned September 15, 1912.

HUDSON RIVER.

On April 1, 1912, Dr. Archibald W. Thomson, Junior Assistant Physician, was transferred from Central Islip State Hospital and on May 15, 1912, Dr. Walton Hovey, Junior Assistant Physician, resigned. Dr. Florence A. King was promoted from Junior Assistant Physician to Woman Physician on May 15, 1912.

Dr. Herman F. May was transferred to Buffalo State Hospital on November 1, 1912.

Dr. William C. Porter was reinstated as Assistant Physician on October 1, 1912.

MIDDLETOWN.

Dr. Harry V. Bingham, Assistant Physician, and a member of the staff of the hospital since 1905, resigned November 1, 1912, to enter private practice at Madison, N. J.

Dr. Harry B. Ballou, Assistant Physician, and a member of the staff since 1905, resigned December 8, 1912, to accept a position on the staff of the Westborough (Mass.) State Hospital.

Dr. Elijah S. Burdsall was promoted to the grade of Assistant Physician December 1, 1912.

Dr. Harry S. Blossom was appointed Clinical Assistant October 12, 1912, and promoted to Interne November 9, 1912.

Dr. Samuel B. Pond was appointed Clinical Assistant April 13, 1912, and promoted to Medical Interne May 10, 1912.

BUFFALO.

Dr. John L. Eckel resigned to study in Germany, October 16, 1911.

Dr. Wm. W. Wright was appointed Second Assistant Physician January 1, 1912.

Dr. Wm. W. Wright was appointed Assistant Physician in the Psychiatric Institute February 13, 1912.

Dr. Christopher Fletcher was appointed Second Assistant Physician May 1, 1912.

Dr. Herbert C. Mann resigned as Interne September 15, 1912.

BINGHAMTON.

Dr. Warren Z. Dell was appointed Medical Interne January 2, 1912, and resigned May 20, 1912, to enter private practice.

Dr. Harry I. Partridge resigned January 6, 1912.

Dr. Edward W. Groll was appointed Medical Interne April 2, 1912, and promoted to Junior Physician May 1, 1912.

Dr. Robert D. Schrock was appointed Medical Interne June 11, 1912.

Dr. Fred G. Benton was appointed Medical Interne July 1, 1912.

Dr. Blinn A. Buell was appointed Medical Interne July 1, 1912, and resigned November 9, 1912, to accept a position as Medical Interne in Blockley Hospital, Philadelphia.

Dr. John Irvine McKelway resigned August 1, 1912, to accept a position as Deputy Medical Examiner in the office of the Bureau of Deportation, New York City.

Dr. William A. Andrews was appointed Medical Interne December 21, 1912.

ST. LAWRENCE.

Dr. Chester Waterman was transferred to Willard State Hospital and promoted to Second Assistant Physician April 30.

Dr. William J. Mahoney was appointed Medical Interne June 15.

Dr. Ralph H. Dunning was appointed Medical Interne July 5.

Dr. Horace Montgomery resigned as Medical Interne December 20, to enter private practice.

ROCHESTER.

Dr. Willard H. Veeder was promoted January 1 from Assistant Physician to Senior Assistant Physician.

Dr. Mary A. Nickerson was promoted January 1 from Junior Assistant to Assistant Physician.

Dr. Sarah Pierson was promoted from Junior Assistant to Assistant Physician January 1.

Dr. Harold H. Fox was appointed Medical Interne June 6.

Dr. Marion E. Blackman was appointed Medical Interne October 1.

Dr. Leon M. Wilbor, Medical Interne, resigned on October 1.

GOWANDA.

There have been no changes in the medical staff during the past year with the exception of the changes in titles of offices brought about by the new Schedule of Officers' Salaries, whereby Dr. Carl von A. Schneider becomes Senior Assistant instead of Second Assistant, and Dr. Frederick P. Schenkelberger and Dr. Percy R. Vessie become Assistant Physicians instead of Junior Physicians.

KINGS PARK.

Resignations.

Dr. Frank Quackenbush, Visiting Dentist, April 30, 1912.

Dr. Darwin O. Lyon, Assistant in Psychology, July 30, 1912, for personal reasons.

Dr. Flora Nagel, Resident Dentist, July 28, 1912, on account of illness.

Dr. Sherman Brown, Assistant Physician, October 31, 1912, to accept a position as Medical Superintendent of Kenilworth Sanitarium, Kenilworth, Ill.

Appointments.

Dr. Calvin B. West, Senior Assistant Physician, January 1, 1912.

Dr. Mary R. Bowman, Medical Interne, March 4, 1912.

Dr. Russell E. Blaisdell, Assistant Physician, May 1, 1912.

Dr. Howard T. Paffard, Medical Interne, May 27, 1912.

Dr. R. Grant Barry, Medical Interne, June 7, 1912.

Dr. Margaretta R. Riegel, Medical Interne, July 1, 1912.

Dr. Isaac J. Furman, Medical Interne, July 15, 1912.

Dr. Harry A. Steckel, Medical Interne, September 1, 1912.

Dr. Flora Nagel, Resident Dentist, May 5, 1912.

Dr. Darwin O. Lyon, Assistant in Psychology, June 5, 1912.

Dr. Helena B. Pierson, Medical Interne, November 16, 1912.

Dr. Edne M. Conde, Resident Dentist, November 17, 1912.

Promotions.

Dr. Aaron J. Rosanoff, Second Assistant Physician to First Assistant Physician, January 1, 1912.

Dr. Delmer D. Durgin, Junior Physician to Assistant Physician, March 15, 1912.

Dr. Philip C. Washburn, Assistant Physician to Second Assistant Physician, April 13, 1912.

Dr. Mary R. Bowman, Medical Interne to Junior Physician, June 1, 1912; to Assistant Physician, July 1, 1912.

LONG ISLAND.

Dr. E. M. Somers was appointed Superintendent January 17, 1912.

Dr. Jacob T. Krause was promoted to grade of Junior Assistant, April 1, 1912.

MANHATTAN.

Appointments.

Amos G. Barton, Medical Interne, January 1, 1912.

John H. Childs, Medical Interne, January 10, 1912.

LeRoy C. Grau, Special Attendant (medical), February 18, 1912.

Robert F. Lawless, Special Attendant (medical), March 30, 1912.

James F. Vavasour, Medical Interne, June 19, 1912.

Eugene N. Boudreau, Medical Interne, July 1, 1912.

Fred J. Conzelman, Medical Interne, September 1, 1912.

Morris M. Sherman, Medical Interne, November 1, 1912.

Charles H. Stoerzer, Special Attendant (medical), November 1, 1912.

Frederick D. Devendorf, Medical Interne, November 30, 1912.

Resignations.

John L. Washburn, Assistant Physician, January 1, 1912.

Michael Schuman, Assistant Physician, January 6, 1912.

Morris J. Karpas, Second Assistant Physician, April 12, 1912.

Robert F. Lawless, Special Attendant (medical), June 7, 1912.

Louis E. Bisch, Medical Interne, September 1, 1912.

Sanger Brown, Assistant Physician, September 15, 1912.

John H. Childs, Junior Physician, October 21, 1912.

Promotions.

Edmund J. Barnes, to Assistant Physician, February 1, 1912.

James P. Kelleher, to Assistant Physician, March 6, 1912.

Arthur E. Soper, to Assistant Physician, March 10, 1912.

Gerhard L. Moench, to Junior Physician, March 21, 1912.

John H. Childs, to Junior Physician, May 13, 1912.

LeRoy C. Grau, to Medical Interne, June 3, 1912.

Ralph P. Folsom, to Second Assistant Physician, July 1, 1912.

Amos G. Barton, to Assistant Physician, July 25, 1912.

CENTRAL ISLIP.

Appointments.

Dr. Adeline M. Westcott was appointed Medical Interne January 5, 1912.

Dr. H. S. Fruitnight was appointed Medical Interne June 1, 1912.

Dr. Harry Elkins was appointed Medical Interne June 5, 1912.

Dr. D. C. Wiggin was appointed Medical Interne June 10, 1912.

Dr. M. M. Grover was appointed Medical Interne July 20, 1912.

Dr. J. L. Van de Mark was appointed Medical Interne August 1, 1912.

Promotions.

Dr. A. M. Westcott was promoted from Medical Interne to Woman Physician June 1, 1912.

Dr. L. S. London was promoted from Junior Assistant Physician to Assistant Physician July 1, 1912.

Dr. W. N. Barnhardt was promoted from Junior Assistant Physician to Assistant Physician July 1, 1912.

Dr. W. A. Conlon was promoted from Junior Assistant Physician to Assistant Physician July 1, 1912.

Dr. J. B. Allen was promoted from Junior Assistant Physician to Assistant Physician July 1, 1912.

Dr. T. W. Simon was promoted from Assistant Physician to Senior Assistant Physician August 1, 1912.

Dr. A. E. Ullman was promoted from Assistant Physician to Senior Assistant Physician August 1, 1912.

Transfers.

Dr. A. W. Thomson was transferred to the Hudson River State Hospital April 1, 1912.

PSYCHIATRIC INSTITUTE.

Dr. Glenn E. Myers, promoted from Junior Physician to Assistant Physician, February 1, 1912.

Dr. Charles Ricksher, Assistant in Clinical Psychiatry, resigned February 13, 1912, to take a position in Kankakee State Hospital, Hospital, Ill.

Dr. William W. Wright, Senior Assistant Physician, was appointed February 15, 1912.

INDIVIDUAL ITEMS.

HUDSON RIVER.

Mr. E. Lyman Brown of Wappingers Falls, N. Y., was appointed on the Board of Managers, March 13, 1912, succeeding Mr. Isaac W. Sherrill whose term expired December 31, 1911. On April 11, 1912, Governor Dix appointed Mr. W. B. Dinsmore, and on November 23,

1912, Mr. Horatio Bain, the former to fill the unexpired term of Mr. Gourley, resigned, and the latter to fill the unexpired term of Mr. Reginald W. Rives.

MIDDLETOWN.

Maurice C. Ashley, M. D., Superintendent, was re-elected as Clinical Professor, Mental Disease, New York Homeopathic Medical College.

Nelson W. Thompson, M. D., Assistant Physician, was commissioned as 1st Lieutenant in the Ordnance Department N. G. N. Y. and attached to the 1st Infantry.

Arthur S. Moore, M. D., Assistant Physician, attended school for Medical Officers, N. G. N. Y., Peekskill, New York, June 22 to 29, 1912, inclusive.

Dr. Elijah S. Burdsall was married to Miss E. Bernice Smith of Pennington, N. J., on April 7, 1912.

BINGHAMTON.

In March, 1912, Mr. Henry A. Stevens of Binghamton, N. Y., was appointed to fill a vacancy in the Board of Managers due to the retirement of Mr. Harry N. Gardner.

An up-State conference of hospital physicians was held at this hospital October 9-10, 1912, at which important papers were presented by the hospital medical staff.

The graduation exercises of the Training School for Nurses were held in the Assembly Hall on July 2, 1912. The address for the occasion was delivered by Rev. G. Murray Colville, of Binghamton, N. Y. There were nine members in the graduating class, five of whom were men and four women.

ST. LAWRENCE.

Dr. Horace Montgomery was married August 31 to Miss Harriet Short of Waddington, N. Y.

Dr. John R. Ross was married October 5 to Miss Martha MacConnell of Brooklyn.

Dr. Paul G. Taddiken visited the hospital for the insane at Brockville, Ontario, September 30.

Dr. John R. Ross visited the Boston State Hospital and the Boston Psychopathic Hospital in October.

Dr. Aaron T. Colnon visited the Enoch-Pratt Hospital at Baltimore.

GOWANDA.

Dr. D. H. Arthur, Superintendent, Dr. C. V. Schneider, Second Assistant, and Dr. P. R. Vessie, Junior Assistant, attended sessions of the American Institute of Homeopathy held at Pittsburg, Pa., June 16-22, 1912.

MOHANSIC.

Hon. A. Outram Sherman was appointed a member of the Board of Managers of this hospital to fill the unexpired term caused by the death of Mr. J. Howard Wainwright.

Miss Mary Flexner was re-appointed a member of the Board of Managers.

In the November meeting of the Board, Mr. A. J. Shipman was elected President of the Board and Miss Mary Flexner, Secretary.

Dr. Isham G. Harris, Superintendent, attended the meeting of the American Medico-Psychological Association, at Atlantic City, May 27-31.

Dr. William D. Granger, member of the Board of Managers, was ill during about six months of the year 1912. We are glad to report that he is now quite convalescent.

Dr. S. F. Mellen, Assistant Physician at Hudson River State Hospital, was Acting Superintendent at Mohansic State Hospital during the vacation period of Dr. Isham G. Harris, from November 6 to 15.

KINGS PARK.

Dr. C. Floyd Haviland, First Assistant Physician, had a leave of absence from April 1, 1912 to July 20, 1912, to take a trip through Europe.

Dr. Calvin B. West, Senior Assistant Physician, had a leave of absence from July 1 to September 30, 1912, on account of illness.

LONG ISLAND.

On February 22, Dr. Joseph Smith was married to Miss Sophia Sagor of New York City.

MANHATTAN.

Dr. W. W. Wright, Senior Assistant Physician, was married to Miss Gertrude Webb, on October 23, 1912.

Dr. James F. Vavasour, Medical Intern, was married to Miss Elizabeth L. Robinson, on November 21, 1912.

Dr. Arthur M. Phillips, Senior Assistant Physician, was married to Miss Lynine S. Whitaker, on November 21, 1912.

Dr. Charles I. Lambert spent six months in study in Munich and Breslau, Germany.

The Rev. Father Duff retired as Catholic Chaplain and was succeeded by the Rev. Father Raymond.

Dr. George H. Kirby, Director of Clinical Psychiatry, was married to Miss Jeanette H. Kruszezwska, on April 29, 1912.

CENTRAL ISLIP.

Dr. M. B. Heyman visited the South Carolina State Hospital at Columbia, South Carolina, on December 12, 1912.

Dr. D. Corcoran visited Guys' Hospital in London, England, in August, 1912 and St. Patrick's Hospital in Dublin, Ireland, in August, 1912.

Dr. W. A. Conlon was married to Miss A. E. Thatcher, at Setauket, L. I., December 7, 1912.

PSYCHIATRIC INSTITUTE.

Dr. C. I. Lambert, Associate in Neuropathology, was on leave of absence from May 21, 1912 to December 19, 1912.

NOTES OF IMPORTANCE ON HABEAS CORPUS CASES.

BINGHAMTON.

A writ of habeas corpus was secured by patient I. L. B., the hearing being held March 18, 1912, before Hon. Albert F. Gladding, Justice of the Supreme Court, at Norwich, N. Y., and the patient was again remanded to the care and custody of the hospital. This was the sixth hearing this patient has had since his admission to the hospital April 19, 1909.

Another application for writ of habeas corpus was sent by this patient, to Hon. John W. Goff, Justice of the Supreme Court of New York City, who referred it to Hon. Albert F. Gladding, Justice of the Supreme Court of the Sixth Judicial District, to be heard by him on October 2, 1912. The patient refused to have his hearing before Justice Gladding and the proceeding was therefore dismissed.

GOWANDA.

On May 2, 1912, the patient, Arthur L. Andrews, was taken to Buffalo on habeas corpus proceedings instigated by his mother and sister. He was ordered back to the hospital to await further directions. On May 7 Justice John S. Lambert issued a court order directing that the patient be given to the custody of his mother under a \$1,000 bond.

KINGS PARK.

In the case of H. L., after hearing the testimony of the ward physician the writ was dismissed and the patient remanded to the hospital.

MANHATTAN.

V. C., Number 57893.

In April a writ of habeas corpus was served in the case of the above named, and the patient was taken before Justice Bischoff. The judge, however, dismissed the case. The patient is still an inmate of the hospital.

M. S., Number 63120.

In August a writ of habeas corpus, issued by Justice Dugro upon the request of the patient's attorney, was served in the case of the above named. On the 13th of August the patient was brought to court in accordance therewith, and after a hearing the judge decided that inasmuch as the patient was not suicidal or homicidal, and had

sufficient funds to maintain her in a sanitarium, if patient was willing to go to same he decided to release her upon these terms. She, accordingly, was discharged September 4, 1912.

C. S., Number 52484.

In September a writ of habeas corpus was served in the case of the above named. The patient was brought before Justice Delaney of the Supreme Court of the State of New York. In this case "The writ sustained relator Charlotta Schonemann discharged in the custody of her husband, Oscar Schonemann, on consent of Manhattan State Hospital, dated September 4, 1912."

J. R., Number 60208.

In October writ was served in the case of the above named patient, who was admitted September 16, 1912. He is an advanced case of dementia paralytica, and it was impossible to produce him in court because of poor physical condition.

H. M., Number 64377.

In November a writ was served in the case of the above named, who was admitted October 30, 1912. This patient is suffering from dementia paralytica. The writ was withdrawn and the patient returned to the hospital.

NEW HOSPITAL FEATURES: CONSTRUCTION, ADMINISTRATION, THERAPEUTIC OCCUPATION, ETC.

UTICA.

The cold storage building and ice plant authorized by the Legislature of 1911, the erection of which was begun last summer, is nearly completed and will probably be occupied early in the year 1913.

The provisions of the law of 1911 which permitted the extension of Hickory Street across the hospital property were carried out by the city of Utica within the period set by law and the street was opened to traffic June 12, 1912.

The first parcel of land of the Marcy site was acquired by the Hospital Commission on October 11, 1912. Since then several additional parcels have been bought and it is expected that the purchase of all the land for which options have been secured will be made shortly.

One of the farm houses on the site has been remodeled and is now occupied by 15 male patients.

WILLARD.

During August and September, six cases of typhoid fever occurred in the hospital. One patient became prostrated as a result of intestinal hemorrhage and died following an intestinal perforation. The other cases recovered, although nearly all had developed a severe type of the disease.

The construction of a sewage disposal plant was commenced early in October, soon after the contract was awarded to the New York Sewage Disposal Company of New York City. A large proportion of the intercepting sewer has been completed. The mild weather of the early winter has favored the progress of construction of the sedimentation tanks and filter beds. It is expected that this important addition to the sanitary equipment of the hospital will be completed and in practical operation early next spring.

Scarlet fever became epidemic to some extent in the hospital, the infection evidently having been introduced from cases in an adjacent village. There were fifteen cases, of whom ten were women nurses or attendants, four were women patients and one was a male patient. A nurse, who had a severe attack, developed purulent otitis media and mastoiditis as complications. After an operation for mastoiditis, she made a good recovery.

There were five cases of diphtheria during the year. Four were moderately severe pharyngeal cases. The other case, an exceedingly disturbed woman patient, who had been recently admitted, developed laryngeal diphtheria of a virulent type, due to mixed infection. She died on the second day, although given large doses of diphtheria antitoxin.

HUDSON RIVER.

A portion of the third floor of the south wing of the main building is being remodeled to make accommodations for nurses. This will supply much needed additional nurses' quarters.

Work is progressing on the addition to the Reception Hospital and it will be finished early in the spring. This applies also to the new wards, 46 and 47, both of which will be a valuable addition to the hospital facilities for caring for disturbed patients.

The excavation for the sedimentation basin is nearly complete and a new water line to the Cottage department is being constructed.

BINGHAMTON.

In compliance with the general fire protection law, practically all of the doors of the hospital leading to fire escapes and other exits, have been changed so as to swing outward. A new combination chemical and hose wagon, drawn by horse, has been added to the fire equipment, and a large amount of new hose, a safety net and other devices for use in case of fire, have been provided. Fire escapes have been erected on Ferris Hall, a building designed for the use of about 150 nurses and other employees.

Extensive alterations and repairs have been made to the roofs of a number of the hospital buildings. Box gutters which had become defective and were causing serious damage to walls by allowing water to penetrate them, have been replaced with over-hung gutters which completely remedy the trouble.

An addition to the bakery has been erected, which provides a much larger bread room on the first floor, and two rooms for employees on the second floor. The toilet section in connection with Ward 8 has been rebuilt, materially enlarged and equipped with entirely new plumbing.

Two of the tents at Pine Camp have been replaced by more permanent construction in the form of rustic buildings constructed of timber cut in the hospital forest, but with the side walls made of canvas, removable in winter.

Provision has been made by legislative appropriation for enlarging the laundry and for the complete renewal of the electric lighting system. The plans, however, have not yet been completed.

ST. LAWRENCE.

A new coal pocket and additions to the railroad trestle have been completed.

A brooder and incubator house have been built.

A new carpenter and blacksmith shop and a root cellar are under construction.

Considerable additional fire protection has been added.

The grounds have been improved by the addition of cement sidewalks.

By the kindness of the State Conservation Commission, improvements were made at the summer camp at Lotus Island.

In May the hospital received filtered St. Lawrence water through the new filtration plant at the City of Ogdensburg. This gives us a decidedly better water than the cloudy Oswegatchie.

In November a rather extensive, although not serious, epidemic of follicular tonsilitis occurred and spread quite rapidly before the precautionary measures taken to check it were successful.

The re-education and occupation work of patients continues.

GOWANDA.

An automobile garage has been built back of the superintendent's residence for the accommodation of the automobiles owned at the hospital.

A small addition to the power house has been built in which are to be placed the new hot water heaters allowed by the legislature. The installation of these heaters will supply the institution with sufficient hot water for all purposes.

About 1,700 feet of cement fence has been constructed along the public road on the west side of the grounds, adding much to the appearance of the grounds. Many alterations and additions have been made in order to meet the recommendations of the State Fire Marshal. These include the metal lining of dumb waiter shafts, additional fire escapes, the placing of electric wires in conduits, changing of doors to swing outwardly, placing of fire doors, etc.

On March 5, 1912, Miss Della M. Phillips was appointed Superintendent of the Training School at this hospital. Miss Phillips is by education and experience well fitted for this position and the appointment fills a long-felt need.

On May 12, Miss Alice Kleist, was transferred from the St. Lawrence State Hospital and placed in charge of calisthenic and industrial work for women patients. A good beginning has been made since that time along these lines and we expect great progress in the coming year.

MOHANSIC.

In January, two of the employees were taken ill with measles. They were isolated and the precautions taken to prevent the spread of the disease were successful. Source of infection could not be traced.

In February and March, 1912, a number of the employees suffered from acute follicular tonsilitis. No patient contracted the disease. The first case was suspicious and we thought we were dealing with diphtheria and immediately gave antitoxin. Culture from the throat was sent to the Hygienic Laboratory at Albany for examination. We were gratified to learn that the culture was negative for diphtheria. In April, one of the patients was taken very ill, suffering from cholecystitis and cholelithiasis. It was necessary to send the patient to Peekskill where a cholecystotomy was performed by Dr. Knight of the Peekskill Hospital. The operation was very successful and the patient made a good recovery.

In December, 1911, the State Hospital Commission purchased the Beiderhase property consisting of 38 acres, for the sum of \$12,000.00. The house on this property has been renovated, painted, furnished and was opened for employees, July 1.

The acetylene generators for the various houses on the property have been taken out and Blaugas installed.

Two large root cellars, 20 x 40, of stone and cement were constructed during the past year. Enclosed sheds for housing road roller, auto truck, thresher and farm implements, were erected. Ice house of 700 tons capacity was completed in December, 1911. During the summer of 1912, fifteen piggeries, 10 x 12, were built. Telephone system connecting the various houses with the office has been installed. A new floor was laid in the dining room of the Strang house. In April, a contract for the construction of a branch railroad to and through the hospital grounds was awarded to Thos. O'Hern of Yonkers, in the sum of \$49,559.00. Work on this road is progressing slowly.

KINGS PARK.

Group Three was opened for the reception of 350 male patients on April 9—infirm, chronic, idle and working patients.

Pavilions for the reception of 250 tubercular patients, 50 men and 200 women, are under construction.

Extensions to staff's and clerks' dining rooms at A-B Kitchen are under construction.

Two new wells have been finished; they are over 400 feet deep, and each discharges over 200,000 gallons daily. Four others are being driven.

An auto truck has been purchased and is proving to be an economy as it does the work of several teams in distributing supplies to the more distant portions of the hospital.

The auxetophone that was recently purchased has been used to give several very enjoyable concerts.

A moving picture machine has been purchased and entertainments are now being given to the patients fortnightly.

A new record has been made in the extension of occupation for patients. Taking at random the date of August 21, the reports show that 70.4 per cent of all patients on the male side and 44.9 per cent on the female side were employed at useful occupations on that date. Further extensions are deemed possible before the irreducible residue of infirm patients confined to their beds is reached.

LONG ISLAND.

The contract for the renewal of electric wiring and plumbing, installation of fireproof stairways and steel ceilings in the main building, begun January, 1911, was completed July 19, 1912.

Automatic fire sprinklers have been installed in the attics, basements and sub-basements. Six additional exits from the wards have been made.

Electric wiring of the laundry building has been put in iron conduits, and other precautionary measures have been taken to lessen accidents in the laundry.

An automobile truck has been purchased and a garage has been erected.

Steel ceilings have been installed in the quarters occupied by employees.

Repairs to the front porch and columns have been made.

Furniture and rugs for the reception and convalescent wards have been purchased.

The shops, formerly located in the basement in the main building have been removed to an outside building.

A garbage incinerator has been installed.

Receptacles for soiled clothing from the wards have been constructed.

Arc lights for the grounds are being installed.

General repairs to the roof of the main building are being done by contract.

The continuous baths for each reception service have been in more or less constant use since July.

A farm colony for patients was established at Creedmoor last spring,

(This was formerly the State Rifle Range, but the property of the Long Island State Hospital since 1908). Patients to the number of thirty-two have been housed in the Seventh Regiment building. A block plan for a hospital for twenty-three hundred patients, at Creedmoor, was approved by the Board of Managers October 26, and by the State Hospital Commission December 5, 1912.

The occupation class has continued as one of the therapeutic features of the institution. In December a profitable fair was held, the articles made by the patients in the class being sold.

MANHATTAN.

A new 200 K. W. Fort Wayne generator has been installed.

Camp Dent, which is occupied by women suffering from tuberculosis, has been enlarged and a dining room added.

The Kinnicutt cottages, accommodating 200 patients, were completed and occupied early in the year. Three rooms in these cottages have been fitted up with electro-therapeutic appliances including a wall cabinet, designed to give galvanic, faradic, combined galvanic and faradic, sinusoidal and diagnostic light currents; a Wappler massage apparatus; a Wappler radiographic treatment machine; a Wappler protective tube shield and stand. All the above appliances having the necessary equipment in the form of electros, etc. The static machines from the department for men and from the department for women have been thoroughly renovated and moved to the electrical treatment rooms.

The two tents, which are supplemental to the camp for men suffering from tuberculosis, are to be done away with, and two new camps, connected with a dining room, are now in course of construction.

A contract has been made for the installation of a new 50 ton compressor for the refrigerating plant.

The plans for the new laboratory, for which an appropriation of \$10,000 was made, were prepared at the hospital and approved by the State Architect. The work of construction has been begun, and it is hoped that this building will be ready for occupancy by spring.

Plans have been prepared by the hospital mechanics and approved by the State Architect for enlarging the Assembly Hall, and work will be begun at an early date.

Bids have been advertised for the new nurses' home, and the plans are now being prepared for a building for 200 women patients of the disturbed class.

A vault for patients' property was built in the rear of the Administration Office in the Verplanck Building.

The residence of the Director of the Psychiatric Institute was finished last spring and occupied in June.

On the application of the State Hospital Commission and the superintendent of the hospital, a temporary injunction was granted restraining the New York Connecting Railroad Company from beginning

work on the proposed bridge over Ward's Island. An argument was had for continuing this injunction but a decision has not yet been given.

The occupation classes on both the men and women's divisions have been very successful, and new plans are being made for extending this work as well as the work in physical culture.

CENTRAL ISLIP.

Smith Group, consisting of six two-story detached pavilions, with a central dining room and kitchen was completed and fully occupied in February, 1912; the capacity of this group is six hundred, equally divided between men and women.

MacGregor Group, consisting of three two-story pavilions, with a central dining room, built on plans similar to the Smith Group, is rapidly nearing completion and will be ready for occupancy late in the spring.

A two-story extension to both divisions of the Reception Service is nearly completed.

NOTABLE OCCURRENCES: INJURIES, RESCUES, SPECIAL CAPABILITY.

UTICA.

One of the dining room attendants was assaulted and kicked in the abdomen by a disturbed woman patient. Following the injury, the employee had severe uterine hemorrhage which persisted for several days and she was confined to bed for several weeks. She returned to duty, but did not regain her strength and after a few weeks resigned and subsequently was operated upon at a general hospital for some internal difficulty.

GOWANDA.

Attendant Gertrude Keele was kicked by a patient, causing an inguinal hernia.

KINGS PARK.

There were four suicides during the past year, two at the hospital and two of patients who were at home on parole.

In April, patient M. A. N. succeeded in eluding the watchfulness of the night nurse and secreted herself in a clothes closet; she there committed suicide by strangulation, using a loop of the laundry bag for the purpose; she was still gasping when discovered, her absence having been noted, but efforts at resuscitation failed.

In July, patient K. H. committed suicide in her room by hanging herself with a strip from a laundry bag. This patient had assisted

with the ward work for several years and never having shown suicidal tendencies it was comparatively easy for her to elude the attendants, no special watch being kept upon her.

The third case was B. L., who had been on parole for over four months, when she without previously manifesting suicidal tendencies, committed suicide by jumping from the roof of her house on February 17, 1912. She suffered from a mixed phase of manic-depressive insanity, and the suicidal impulse appears to have been of sudden development during an attack of depressed excitement.

In the fourth case of suicide the patient, L. C. L., had been home on parole for nearly four months and neither while in the hospital nor after her return home had she ever manifested suicidal tendencies. On July 3, however, she committed suicide at home by inhaling illuminating gas.

In January, patient H. M. was supposed to have eloped and, no information having been received concerning him, he was discharged on February 22, after thirty days parole. On February 25, while ice was being cut from the lower reservoir his body came to the surface of the water. This patient never exhibited suicidal tendencies and, in the opinion of the Coroner, his drowning was accidental, he evidently having broken through the ice in walking across the reservoir. The patient had a parole of the grounds and it is doubtful if he intended to elope, as was first thought.

LONG ISLAND.

On July 21 a voluntary patient obtained a razor from a probationer who had been employed but a few days. The patient inflicted a superficial wound to his throat. He died a few days later from long-standing physical conditions.

During the night of August 9 a patient unscrewed the hose nozzle from the interior fire apparatus and fatally assaulted another patient.

MANHATTAN.

At 10 P. M. on July 3, a fire was discovered in the library of the Psychiatric Institute. Through prompt efforts on the part of the local, assisted by the city fire department, it was kept from spreading to the Verplanck Building which is occupied by 400 patients.

A gold medal was presented to Mr. Edward Ballgowan on October 9 for his bravery in rescuing a patient from the top of the scaffolding surrounding the stack to the East Building boiler house. The Board of Managers had a conference with the State Hospital Commission and recommended the award of a medal to this man, and the Commission viewing it in a broad light decided to establish a hero medal for the entire State hospital service.

January 22, an attendant on Ward 23, was bitten on the right thigh by a patient.

February 19, an attendant in Ward 30, while separating two patients who were quarreling had several handfuls of her hair pulled out by one of the patients, and was also thrown on the floor sustaining an injury to the left knee.

April 15, an attendant was struck by a patient and sustained a fracture of the nose. He was sent to Bellevue Hospital for treatment.

April 22, an attendant, while separating two patients had the little finger of the right hand seized and pushed violently backward by one of the patients, causing a simple fracture of the fifth metacarpal bone.

May 31, an attendant was attacked by a patient who knocked her to the floor and pulled out several handfuls of her hair, kicked her on the head and face, and also bit her on the left shoulder.

July 9, an attendant sustained an injury on left side of abdomen by a patient kicking her.

July 13, Miss Margaret Hughes, an attendant, was drowned while bathing. Miss Ellen O'Rourke, another attendant, jumped into the water in her uniform to aid Miss Hughes, but, unfortunately, she too was drowned. Miss Nellie Scollard, charge nurse of Ward 14, attempted to rescue them, but as the current was too strong, and as she was in danger of being carried away, was forced to return to the shore.

July 25, a patient jumped from the Steamer "Wanderer" but was promptly rescued by the crew.

August 25, while on the exercise grounds, a patient, without any warning, struck an attendant on the left ear, rendering him unconscious.

October 18, a patient of Ward 43, became disturbed and was removed from the dining room. While the attendant was opening the door to his ward, the patient seized him and during the struggle they rolled down twenty stone steps. The patient had a number of ribs fractured from which injuries he died. The case was referred to the Coroner for investigation.

CENTRAL ISLIP.

On January 1, attendants Lizzie Dolan, Mary Hughes, Margaret Hart and Catherine Albach were injured by patient Elizabeth Hobson, admitted October 8, 1910. This patient became very much disturbed and violent and assaulted Catherine Albach, biting her on the left forearm and also inflicting two bruises on the right wrist. Two other patients came to the assistance of patient Hobson and, grabbing brooms from the patients who were working, struck at the other three nurses who were trying to restrain patient Hobson, and in the altercation the three nurses were badly bruised about the face and body. They were incapacitated from duty for four days.

On February 5, attendant Clara Rose was assaulted by patient Essabelle Pittman, receiving several scratches on the face and a severe hair-pulling. Attendant was incapacitated from duty for one-half day.

On March 29, attendant Jeremiah Mahoney was attacked by patient Simon Weber in the dining room. Patient came behind Mr. Mahoney and without provocation struck him on the head with a broom handle, inflicting a scalp wound about three inches long. The attendant fell with the blow, but remained conscious; while the attendant was on the floor, patient struck him again with the broom handle, inflicting slight bruises back of left wrist. The patient is very much demented, and no doubt the attack was the result of a sudden impulse. Attendant Mahoney was incapacitated from duty for two days.

On May 12, Frances Houghtaling, nurse in charge of G-3, was assaulted by patient Eva C. Creighton. She was struck in the face several times and knocked to the floor; her back was strained and she was somewhat bruised. She was incapacitated from duty for a few hours only.

On May 24, John Cook, dining room attendant, was struck in the back of the head by patient Owen Smith. This patient developed hallucinations and thought that the attendant was continually striking him. Mr. Cook, attendant, was rendered unconscious and remained so for a few minutes. He was incapacitated from duty for one day.

On May 30, attendant Margaret Melvey, while opening a door, was pushed by a patient, and her elbow went through the glass and cut her arm so that six stitches had to be taken. She remained on duty at her own request.

On July 16, attendant Raymond Rose was struck on the head with a dish thrown at him by patient Hugh J. Doyle, who became excited and assaultive. Mr. Rose suffered a scalp wound on the forehead which incapacitated him from duty for a short while. During the patient's frenzy he succeeded in breaking several articles of table-ware before being subdued.

On July 19, attendant Ethel Stadtmiller was kicked in the abdomen by patient Ida Rosenbaum. The attendant did not seem to be injured at the time, but subsequently it was necessary to place her in bed. She had some uterine hemorrhage and was quite sore over the seat of injury, but as she had no nausea, vomiting or symptoms of peritonitis the injury is not regarded as serious.

On August 8, charge attendant Patrick Brady, in attempting to separate patient John Kolinski from attendant McEvoy, whom he had knocked down, was struck on the right side and received a painful injury which incapacitated him from duty for one week.

On August 18, attendant Hugh Hamilton was assaulted by patient James T. Hart and received a fracture of the lower jaw. This is the second time Mr. Hamilton was injured by this same patient, having suffered a broken leg last year. The assault was very sudden and without warning. Mr. Hamilton was transferred to the hospital ward and appropriate treatment given. He was incapacitated from duty for one week.

On November 18, attendant Marie Kentan was attacked by patient

Maria Granz who threw her to the floor and kicked her in the back. Attendant was incapacitated from duty for four days.

On November 24, attendant August J. Hornez received a severe contusion of the right foot. It appears that while this attendant was in charge of a squad working on the ash cars, two patients of the squad were moving the swill-car in order to make room for the others when the car ran away from them and was running down on another patient who was in the track. The attendant attempted to stop the car so that it would not run into the other patient, and in doing so received the contusion above noted. He was incapacitated from duty for three days.

On December 16, attendant Katherine McCluskey was assaulted by patient Elida Carlson, receiving a bite on the left arm and several scratches on the right hand. Attendant remained on duty at her own request.

MEDICAL MEETINGS.

LONG ISLAND.

The Brooklyn Society for Neurology met at the hospital May 1. Papers were read by the members of the hospital staff.

BIBLIOGRAPHY OF THE PHYSICIANS OF THE STATE SERVICE FOR THE YEAR 1912.

WILLARD.

ROBERT M. ELLIOTT, M. D., Superintendent.

"Insanity and Its Causes." Delivered in the Presbyterian Church at Trumansburg, N. Y., June 9, 1912.

"The Chief Characteristics of the Various Types of Mental Disorder." Delivered before the Willard After-Care Committee, October 4, 1912.

WALTER G. RYON, M. D., Medical Inspector.

"A Study of the Mental Deterioration in Huntington's Chorea, with presentation of Cases." Read before the Inter-hospital Conference, Willard, February, 1912.

THOMAS J. CURRIE, M. D., First Assistant Physician.

"Studies of Heredity in Two Related Family Groups." Read before the Inter-hospital Conference, Willard, February, 1912.

WILLIAM H. MONTGOMERY, M. D., Senior Assistant Physician.

"A Case of Essentially Motor Aphasia." Read before the Inter-hospital Conference, Willard, February, 1912.

CHESTER WATERMAN, M. D., Senior Assistant Physician.

"The Prevention of Insanity." Read before the meeting of the Seventh District Branch Medical Society, at Corning, N. Y., October 10, 1912.

LOUIS T. WALDO, M. D., Senior Assistant Physician.

"The Prognosis of Korsakow's Psychosis with Presentation of Cases." Read before the Inter-hospital Conference, Willard, February, 1912.

CHRISTOPHER FLETCHER, M. D., Senior Assistant Physician.

"Study of Insanity in a Family." Read before the Inter-hospital Conference, Willard, February, 1912.

WILLIAM A. SMITH, M. D.

"A Statistical Review of the Causes of Death in 500 Autopsies." Read before the Inter-hospital Conference, Willard, February, 1912.

HUDSON RIVER.

FREDERICK W. PARSONS, M. D., First Assistant Physician.

Public lecture on the "Causes and Prevention of Mental Diseases," given under the auspices of the Committee on Mental Hygiene at Hudson, N. Y.

Formal discussion of Dr. Winter's paper on "Blood Pressure in Nervous Diseases," at the joint meeting of the Newburg Bay Medical Society and the Poughkeepsie Academy of Medicine.

HOWARD P. CARPENTER, M. D., Senior Assistant Physician.

"Causes of Disease." Public health lecture at St. Peter's Church, Poughkeepsie, February 7, 1912.

"Cause and Prevention of Disease." Public health lecture, Pleasant Valley, N. Y., April 12, 1912.

"Bacteria and Disease." Public health lecture, Y. M. C. A., Poughkeepsie, N. Y., December 7, 1912.

MIDDLETOWN.

MAURICE C. ASHLEY, M. D., Superintendent.

"A Review of Two Undiagnosed Cases of Depression." For the New York Psychiatric Society.

"A Homicidal Case Discharged after a Writ of Habeas Corpus." New York Psychiatric Society.

Address to Graduating Class of the Training School for Nurses, Middletown State Homeopathic Hospital.

ROBERT C. WOODMAN, M. D., First Assistant Physician.

"Nine Years' Experience in Manic-Depressive Insanity." Read at the Inter-hospital Conference held at the Middletown State Homeopathic Hospital, April 25, 1912. For publication in the STATE HOSPITALS BULLETIN.

GEORGE F. BREWSTER, M. D., Senior Assistant Physician.

"Depressions with Arteriosclerosis." Read at the Inter-hospital Conference held at the Middletown State Homeopathic Hospital, April 25, 1912.

HARRY V. BINGHAM, M. D., Assistant Physician.

"Sterilization as a Remedy in Hereditary Degeneration." Read at the Inter-hospital Conference held at the Middletown State Homeopathic Hospital, April 25, 1912.

HARRY B. BALLOU, M. D., Assistant Physician.

"Manic-Depressive Insanity of Long Standing." Read at the Inter-hospital Conference held at the Middletown State Homeopathic Hospital, April 25, 1912.

ARTHUR S. MOORE, M. D., Assistant Physician.

"Preliminary Observation in Heredity, with Reference to the Forms of Insanity Occurring in Families." Read before the Inter-hospital Conference, Middletown, N. Y., April 25, 1912.

"Some Recent Advances in the Commitment and Care of the Insane in New York State." Read before the Bay County Medical Society, Bay City, Michigan, May 13, 1912.

Lectures on "Sanitation" and "First Aid" to the Hospital Corps Detachment, 1st Infantry N. G. N. Y.

NELSON W. THOMPSON, M. D., Assistant Physician.

"A Review of the Results of a Modified Vasectomy Operation," Read before the Inter-hospital Conference at Middletown, N. Y., April 26, 1912.

Lectured on the "State Hospital System" and demonstrated lantern slides at conference and exhibit of Mental Hygiene at New York, November 9, 1912.

Demonstrated Exhibit, November 10, 1912.

Papers read before Officers and Non-Commissioned Officers of 1st Battalion and Company I, 1st Infantry N. G. N. Y.:—"Small Arms Firing," October 21st. "Care and Use of the Rifle," November 25th. "Infantry Patrols," December 16th.

BINGHAMTON.

CHARLES G. WAGNER, M. D., Superintendent.

"The Duty of the State to the Insane." An address delivered before the Men's Forum, First Congregational Church, Binghamton, N. Y., December 15, 1912.

THEO. I. TOWNSEND, M. D., First Assistant Physician.

"Examination of the Insane." Read at a meeting of the Sixth District Branch of the Medical Society of the State of New York, October 15, 1912.

"Familial Syphilis and the Central Nervous System; A Review of the Literature." Read at the up-State Hospital Conference, at the Binghamton State Hospital, October 10, 1912.

EDWARD GILLESPIE, M. D., Senior Assistant Physician.

"Four Interesting Cases of Syphilitic or Parasyphilitic Affections." Read at the up-State Hospital Conference, at the Binghamton State Hospital, October 10, 1912.

"Some of the Common Forms of Insanity." Read before the Academy of Medicine, Binghamton, N. Y., November 19, 1912.

WILLIAM J. TIFFANY, M. D., Senior Assistant Physician.

"Histopathology of the Senile Brain, with Special Reference to Miliary Plaques—Twelve Illustrative Cases." Read at the up-State Hospital Conference, at the Binghamton State Hospital, October 9, 1912.

ROSS McCLURE CHAPMAN, M. D., Senior Assistant Physician.

"A Study of the Etiological Factors in Anxious Depressions, with Cases." Read at the up-State Hospital Conference, at the Binghamton State Hospital, October 9, 1912.

"State Custodial Care of the Defective Classes." Read at a meeting of the State Societies for the Prevention of Cruelty, at Elmira, N. Y., November 14, 1912.

RODNEY R. WILLIAMS, M. D., Assistant Physician.

"A Statistical Study of General Paralysis, with Special Reference to the Various Forms." Read at the up-State Hospital Conference, at the Binghamton State Hospital, October 10, 1912.

ST. LAWRENCE.

RICHARD H. HUTCHINGS, M. D., Superintendent.

Opened the discussion of Dr. Wm. L. Russell's paper on "The Prevention of Insanity" at the New York State Conference of Charities and Correction held at Syracuse, November 20.

PAUL G. TADDIKEN, M. D., First Assistant Physician.

"Internal Secretions." Read before the Ogdensburg Medical Society, June 4.

JOHN R. ROSS, M. D., Senior Assistant Physician.

"The Care of Advanced Tuberculosis." Read before the Ogdensburg Medical Society, March 5.

"Present Status of the Wassermann Reaction." Read before the Ogdensburg Medical Society, September 3.

"Argument in Favor of the Establishment of a Tuberculosis Hospital in St. Lawrence County." Delivered at Canton, N. Y., December 2.

ROBERT KING, M. D., Senior Assistant Physician and Pathologist.

"Causes of Trigeminal Neuralgia." Read before the Ogdensburg Medical Society, May 7.

ARTHUR G. LANE, M. D., Assistant Physician.

"Treatment of Tuberculosis of the Knee." Read before the Ogdensburg Medical Society, May 7.

AARON T. COLNON, M. D., Assistant Physician.

"Vaccination against Typhoid." Read before the Ogdensburg Medical Society, May 21.

SAMUEL GINSBERG, M. D., Junior Physician.

"Epilepsy in Pregnancy." Read before the Ogdensburg Medical Society, May 7.

"Pathogenesis of Epilepsy." Read before the Medical Society of the County of St. Lawrence, October 5.

HYMAN L. LEVIN, M. D., Medical Interne.

"Tuberculin Diagnosis of Tuberculosis." Read before the Ogdensburg Medical Society, March 5.

"Treatment of Vascular Nævi." Read before the Ogdensburg Medical Society, June 4.

"Bacterial Vaccines." Read before the Ogdensburg Medical Society, December 3.

CHESTER WATERMAN, M. D., Assistant Physician.

"Aneurism of the Thoracic Aorta." Read before the Ogdensburg Medical Society, January 16.

"Intestinal Parasites." Read before the Ogdensburg Medical Society, April 16.

HORACE MONTGOMERY, M. D., Medical Interne.

"Treatment of Persistent Occipito Posterior Positions." Read before the Ogdensburg Medical Society, March 19.

GOWANDA.

CLARENCE A. POTTER, M. D., First Assistant Physician.

"Drugs in Manic Cases." Read before the New York State Homeopathic Medical Society at Buffalo, October 8, 1912. Published in the *Transactions of the New York State Homeopathic Medical Society*.

CARL VON A. SCHNEIDER, M. D., Senior Assistant Physician.

"Mendelian Law Applied to Mental and Nervous Diseases." Read before Western New York Homeopathic Medical Society at Buffalo, April 12, 1912.

"Conditions Leading to Insanity." Read before the Cattaraugus County Medical Society at Salamanca, July 2, 1912.

PERCY R. VESSIE, M. D., Assistant Physician.

"A Contribution upon the Determination of Sex." Published in the *Cleveland Medical and Surgical Reporter*, December, 1911.

"The Cardio-vascular Renal Complex." Published in the *Medical Century*, October, 1912.

- "A Study of Blood Pressure in Five Hundred Cases of Insanity." Read before the New York State Homeopathic Medical Society at Buffalo, October 8, 1912. Published in *The Hahnemannian Monthly*, November, 1912.

ANNE E. PERKINS, M. D., Woman Physician.

- "Common Forms of Insanity." Published in *The Trained Nurse*, January-February, 1912.
- "The Correlation of Pelvic Diseases and Insanity." Published in *The Trained Nurse*, December, 1912.

KINGS PARK.

C. FLOYD HAVILAND, M. D., First Assistant Physician.

- "Occupation for the Insane." Read before the Quarterly Conference of Superintendents held at Ward's Island, December 19, 1911; also before the American Medico-Psychological Association at Atlantic City, May 29, 1912. Published in *NEW YORK STATE HOSPITALS BULLETIN*, May, 1912.
- "Causes and Prevention of Insanity." A popular lecture delivered at Labor Temple, New York City, February 27, 1912.

AARON J. ROSANOFF, M. D., First Assistant Physician.

- "Inheritance of the Neuropathic Constitution." Read before the Quarterly Conference of Superintendents held at Middletown, February 15, 1912. Published in the *Journal of the American Medical Association*, April 27, 1912.
- "Alcohol as a Cause of Insanity." Read before the Women's Medical Society of the City of New York, February 21, 1912. Published in *Woman's Medical Journal*, June, 1912.
- "Exciting Causes in Psychiatry." Read before the American Medico-Psychological Association at Atlantic City, May 30, 1912. Published in the *American Journal of Insanity*, October, 1912.
- "Association in Feeble-Minded and Delinquent Children." (With the collaboration of Dr. F. C. Eastman). *American Journal of Insanity*, July, 1912.
- Review of "Heredity in Relation to Eugenics," by C. B. Davenport. *American Journal of Insanity*, April, 1912.
- Review of "The First Principles of Heredity," by S. Herbert. *American Journal of Insanity*, April, 1912.
- Contribution to the Annual Report of the Kings Park State Hospital.

"Heredity: Insanity: Eugenics." Read at a public meeting held under the auspices of the National Committee for Mental Hygiene at the College of the City of New York, on November 12, 1912. Published in the *N. Y. Evening Sun*, November 13.

CHESTER L. CARLISLE, M. D., Second Assistant Physician.

"The Relation of Certain Psychoses to the Neuroses." Read before the American Medico-Psychological Association at Atlantic City, May 31, 1912.

MANHATTAN.

Besides the usual daily staff meetings held during the morning hours the Ward's Island Psychiatric Society has held a meeting once a month except during the heated term. At these meetings original papers have been read and clinical cases presented by various members of the hospital staff and the Psychiatric Institute. Following is a list of papers read at various meetings by different members of the staff:

WILLIAM MABON, M. D., Superintendent.

A course of twelve lectures at the New York University and Bellevue Hospital Medical School.

A medico-legal paper read at the Ward's Island Psychiatric Society in May, 1912.

Read a paper on "Occupations for the Insane," before the Gilbert School for dancing in July, 1912.

A series of meetings, under the management of the Committee for Mental Hygiene, were held at City College in November, 1912. Dr. Mabon presided at the meeting for nurses.

GEORGE H. KIRBY, M. D., Director of Clinical Psychiatry.

Read a paper on "Syphilis and Insanity" in the City College in November, 1912, at one of the meetings under the management of the Committee for Mental Hygiene.

FRANK R. HAVILAND, M. D., Senior Assistant Physician.

"The Relation of Infective-Exhaustive Psychoses to Manic-Depressive Insanity." Read at the January Inter-hospital meeting, 1912, also at the New York Neurological Society meeting, held at the Academy of Medicine, March 5, 1912. To be published in the *STATE HOSPITALS BULLETIN*.

PHILIP SMITH, M. D., Senior Assistant Physician.

"Psychoses in Twins." Read before the Ward's Island Psychiatric Society. Published in the *New York Medical Journal*.

CLARENCE P. OBERNDORF, M. D., Medical Interne.

- "Constitutional Inferiority and its Psychoses." Published in the *Journal of American Medical Association*, January, 1912.
- "Cases Allied to Manic-Depressive Insanity." Read before the Interborough Conference, Ward's Island, January, 1912. To be published in the STATE HOSPITALS BULLETIN.
- "A Case of Hallucinosis due to Repression." Published in the *Journal of Abnormal Psychology*, February, 1912.
- "The Rôle of Homosexuality in the Development of Paranoia." Read before the New York Psycho-Analytic Society.
- "The Essentials of Psycho-analysis." Published in the *American Journal of Urology*, May, 1912.
- "The Sterilization of Defectives." STATE HOSPITALS BULLETIN, May, 1912.
- "The Disappearance of Angioneurotic Edema Following Appendectomy." Published in the *Journal of the American Medical Association*, August 24, 1912.
- "Sexual Periodicity in the Male." New York Neurological Society, November, 1912.

PSYCHIATRIC INSTITUTE.

AUGUST HOCH, M. D., Director.

- "Review of Bleuler's Schizophrenia." Published in *Review of Neurology and Psychiatry*, June, 1912.
- "Bleuler, Dementia præcox oder Gruppe der Schizophrenien." Published in the *Psychological Bulletin*, April, 1912.
- "The Problem of the Prevention of Insanity." Read before the Medical Society of Kings County, Brooklyn, March 19, 1912.
- "Apraxia." Read before the Ward's Island Psychiatric Society, April 1, 1912.
- "Bilateral Temporal Lobe Lesions." Read before the Section of Neurology and Psychiatry, New York Academy of Medicine, May 14, 1912.
- "Retention Defect and General Paralysis." Read at annual meeting of the American Medico-Psychological Association, Atlantic City, May 29-31, 1912.
- "Acute Syndromes in General Paralysis." Read at Inter-hospital meeting, Binghamton, October 9-10, 1912.
- "Early Manifestations of Mental Disorders." Read at Mental Hygiene Conference and Exhibit, New York City College, November 8-15, 1912.

Annual Report of the Psychiatric Institute, 1911-1912.

CHARLES B. DUNLAP, M. D., Chief Associate in Neuropathology.

"Anatomical Reports, with Lantern Demonstrations on Cases of Chorea, Brain Tumor, Central Neuritis, Aphasia, Tubercular Meningitis, General Paralysis and Syphilis." Read at Inter-hospital meeting, Willard State Hospital, February 20-21, 1912.

"Anatomical Report, with Lantern Illustrations, on Cases of General Paralysis, Lacunar Softenings, Tubercular Meningitis, Epilepsy, Huntington's Chorea, and Paralysis Agitans." Read at Inter-hospital meeting, Middletown State Homeopathic Hospital, April 25-26, 1912.

"Anatomical Report on Cases received from the Binghamton State Hospital, including Syphilis, General Paralysis, Arteriosclerosis, Epilepsy, Central Neuritis, and a Tumor." Lantern Illustrations. Read at Inter-hospital meeting, Binghamton State Hospital, October 9-10, 1912.

"Demonstration of Some of the More Striking Anatomical Changes in the Brains of Senile and Arteriosclerotic Individuals." Presented at Bloomingdale Hospital, White Plains, N. Y., November, 1912.

Report of the Histological Laboratory of the Psychiatric Institute, in the Report of the Director, 1911-1912.

C. I. LAMBERT, M. D., Associate in Neuropathology.

"A Summary Review of the Syphilitic and Metasyphilitic Cases in 152 Consecutive Autopsies." Read at Inter-hospital meeting, Manhattan State Hospital, January 25-26, 1912. Published in *STATE HOSPITALS BULLETIN*, August, 1912.

"A Contribution to Presenile Dementia (Alzheimer's Disease), with Lantern Slide Demonstrations." Read at annual meeting of New York State Medical Society, Albany, April 17, 1912.

(With Dr. MORRIS J. KARPAS).

"Multiple Heterologous Cerebro-Spinal Tumors; Endotheliomata of Cord, Gliomata of Pons and Corpus Callosum." Read before the Section of Neurology and Psychiatry, New York Academy of Medicine, March 13, 1912. Published in *Review of Neurology and Psychiatry*, July, 1912.

STATE HOSPITAL COMMISSION.

JAMES V. MAY, M. D., Medical Member State Hospital Commission.

Appointed by Governor John A. Dix a delegate to represent the State of New York at the National Conference of Charities and Corrections, Cleveland, Ohio, June 12-19, 1912; Fifteenth International

Congress on Hygiene and Demography, Washington, D. C., September 23-28, 1912; New York State Conference of Charities and Corrections, November 19-21, 1912.

"Immigration and the Insane in the State of New York." Published in Special Immigration Number of the STATE HOSPITALS BULLETIN, April, 1912.

"Immigration as a Problem in the State Care of the Insane." Read before the American Medico-Psychological Association at Atlantic City, May 28, 1912. Published in the *American Journal of Insanity*, October, 1912.

"Provisions of the Insanity Law of the State of New York for the Commitment of the Insane and their Care Pending Commitment."

"Mental Disease and Criminal Responsibility." Lectures before the International Extension Course in Nervous and Mental Diseases, Fordham University, September 23 and 24, 1912. Published in the STATE HOSPITALS BULLETIN, November, 1912.

HORATIO M. POLLOCK, Ph. D., Statistician and Editor.

"A Statistical Study of the Foreign Born Insane in the New York State Hospitals." Published in the Special Immigration Number of the STATE HOSPITALS BULLETIN, April, 1912.

"The Cost to the State of New York of the Maintenance of an Insane Patient." Published in the Special Immigration Number of the STATE HOSPITALS BULLETIN, April, 1912.

"The Economic Loss to the State of New York on Account of Insanity in 1911." Published in the STATE HOSPITALS BULLETIN, February, 1913.

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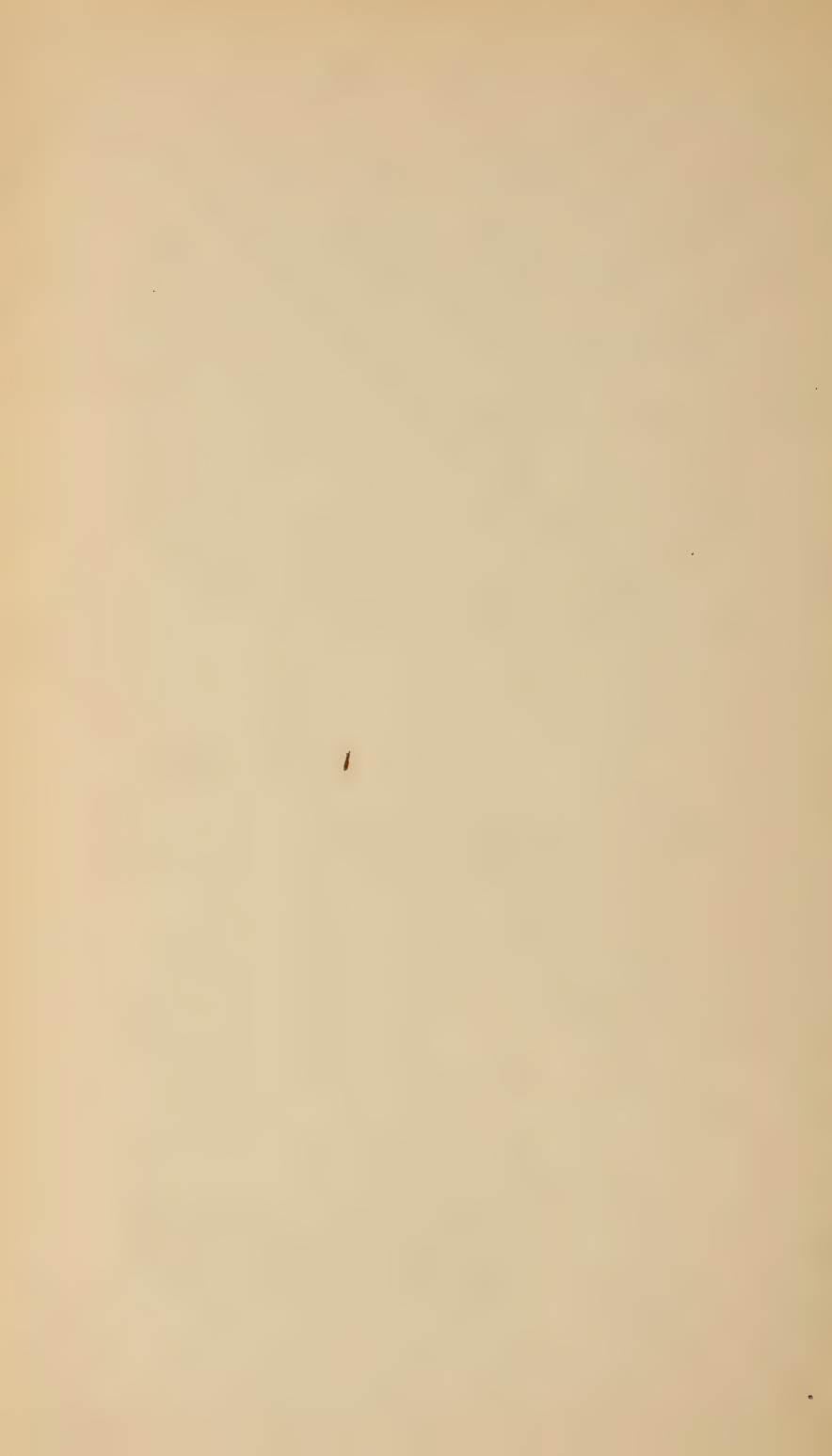
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IMMIGRATION AND THE INSANE IN THE STATE OF NEW YORK.

BY DR. JAMES V. MAY,

Medical Member, State Hospital Commission.

Immigration has long been recognized as one of the causes largely responsible for the startling fluctuations in our population. This is conclusively demonstrated by a careful consideration of available statistical data. In 1880 the population of the United States was 50,155,783, while that of the State of New York was 5,082,871. In ten years the census of the country had increased to 62,979,766 and that of the State to 6,003,174. The enumeration of 1900 showed a total of 76,303,387, accrediting 7,268,894 to New York. The growth in population of the State from 1890 to 1900 was 21 per cent and from 1900 to 1910 amounted to 25 per cent. During this same length of time there was a tremendous influx of foreigners. The reports of the Department of Commerce and Labor show that 455,302 immigrants passed through the various ports of entry into our country in 1890. In 1910 the number had increased to 1,041,570. It is worthy of note that about 76 per cent of these aliens land at Ellis Island and 26 per cent are destined to become residents of New York State. From 1890 to 1900 the increase in the number of insane per 100,000 of population was 26 per cent. In 1910 there was one insane person to each 279 of the total population of the State. In 1890 there were 16,006 insane in the various institutions under the State Commission in Lunacy and 23,778 in 1900, an increase of 48.5 per cent. In 1910 the total number reported was 32,658, or 37 per cent more than in 1900, with a growth of population amounting to 25 per cent during the same period.

The burden imposed upon the State is therefore worthy of most serious consideration and results in an expenditure amounting to more than one quarter of the total revenue available. In February, 1912, there were 31,432 patients in the fourteen State hospitals, 41.9 per cent of whom were of

foreign birth. Careful studies have shown that the frequency of insanity in our foreign population is 2.19 times greater than in those of native birth.

During the year ending September 30, 1911, the State disbursed approximately \$7,378,000 for the care of the insane. It will readily be seen that a large proportion of this expenditure is made necessary in providing for the maintenance of aliens, a burden which the United States Government might well be expected to assume. These considerations induced the State Commission in Lunacy to call the attention of the Governor of the State to the necessity of a thorough investigation to determine what action can be taken to remedy existing conditions. This was done in the following communication under date of February 27, 1912.

ALBANY, N. Y., *February 27, 1912.*

Hon. JOHN A. DIX, *Governor of the State of New York, Executive Chamber, Albany, N. Y.:*

SIR—The large and gradually increasing number of persons of foreign birth who are cared for by the State hospitals for the insane, the difficulty of deporting aliens, the efforts which are being made at the present time toward legislative amendments which will facilitate deportation, and the serious results which are to be expected from a decision recently made by the Attorney-General of the United States, strongly suggests the advisability of an Executive investigation into this important question.

A census conducted by the Department of Commerce and Labor showed that on December 31, 1903 (which is the latest available census report), there were 11,611 foreign born patients in the New York State hospitals for the insane. In addition to these, there were on that date 4,025 patients of foreign parentage and 874 of mixed parentage, only 55.4 per cent of the patients in the public and private institutions of the State at that time being of native parentage.

The statistics prepared by this Commission show that of the total first admissions to the New York State hospitals for the year ending September 30, 1909, 46.3; for the year ending September 30, 1910, 46.2; and for the year ending September 30, 1911, 48.3 per cent were of foreign birth. Thus in the past year, there has been an increase of 2.1 per cent.

The question of the foreign-born population in the State hospitals has received the attention of the Commission in Lunacy for many years. The port of New York is one of the principal ports of entry of the United States and receives at least eight-tenths of all the immi-

grants coming to this country. About twenty-six per cent of the total become residents of the State of New York.

In 1903, as the result of efforts made by representatives of the State Commission in Lunacy, a bill was enacted by Congress restricting the immigration of insane aliens. During the year 1904 an act was passed by the State Legislature amending the Insanity Law and providing for the examination of immigrants at the port of New York to ascertain their mental condition. Provision was made in section 18 of this act, chapter 346, Laws of 1904, for the establishment of a Board of Alienists for the examination of the insane, idiotic, imbecile, and epileptic immigrants, such board to consist of a chief examiner and two assistant examiners to be appointed by the State Commission in Lunacy. This Board was required to inspect and examine immigrants coming into this country at the port of New York for the purpose of determining whether they came within the above mentioned classes. It was also the duty of the Board of Alienists to notify the State Commission in Lunacy of the location of all insane patients who were non-residents of the State of New York, the Board receiving the necessary authority from the Commission in all suitable cases for the investigation and removal of all such cases. The Board was directed to notify the proper authorities of the United States having control of the enforcement of the immigration laws at such port and arrange for the deportation of such alien insane, in accordance with the provisions of the federal enactment. In 1906 the Board was officially recognized by the Federal Government, and an invitation was extended by the authorities at Ellis Island "To witness at the pleasure of the Board the medical examination of immigrants with special consideration for their mental condition, and if any cases should come to their notice after having passed these surgeons, the Government would be pleased to have their attention called to the matter, when the case would be re-examined."

The Board has arranged for the deportation of insane aliens who had been admitted to the various State hospitals, as well as to the observation wards at Bellevue and Kings County hospitals. As a result of the activities of this Board, during the seven years ending September 30, 1911, it investigated 6,910 cases of alien and nonresident insane and of this number 3,718 were removed from the State.

Until 1903, the law permitted the deportation within two years after landing of those who became public charges because of insanity arising from causes existing prior to landing, and within three years of those who had landed in violation of law. In 1907, the period in which deportations could be made in either of these classes was extended to three years, and a corresponding increase in the number of deportations resulted. Since 1905, 1,448 aliens have been deported under federal warrant from the New York State hospitals for the insane. As a result of the activities of the Board of Alienists, the number deported from the New York State hospitals in 1910 constituted about 60 per cent of all aliens deported from public institutions for the insane in the United States.

It is estimated that there are about eight thousand insane aliens in the New York state hospitals at the present time. Immigration is one of the important causes of the increase in our insane population. The removal and deportation of nonresidents and aliens, therefore, constitutes one of the greatest factors at the present time in lessening the constant increase in our insane population. One hundred and seventy aliens and nonresidents were removed in 1905; 192 in 1906; 322 in 1907; 469 in 1908; 575 in 1909; 864 in 1910; and 1,126 in 1911, making a grand total of 3,718. This represents an approximate saving on maintenance, based on the per capita cost of caring for the insane, of practically \$685,490 during the years 1905-1911. If the cost of construction, etc., is included, the total saving as a result of the removal of these aliens and nonresidents is approximately estimated at \$3,251,390. This saving has been effected at a total cost of \$211,600, this amount representing the total expenditures of the Board of Alienists during that time. When the fact is considered that the approximate per capita cost of caring for the insane at the present time is \$190 per annum, and the estimated average hospital life of each insane person is about nine years, the magnitude of the expenditures required will be readily appreciated. At a per capita cost of \$190 per annum, the actual expense involved in caring for the 8,000 aliens at the present time in the New York State hospitals, would amount to \$1,710,000 per annum.

As a consequence of the great overcrowding of our institutions, which is increased by the burden imposed upon the State in caring for the large number of foreign-born insane, new buildings and new institutions are constantly required. It must not be forgotten that very many cases of insanity are due to preventable causes and that with a lessening of the number of alien insane to be cared for, every possible effort should be made to lessen the number of preventable cases, a great majority of which are due to syphilis and alcohol.

Arrangements are being made at the present time for the erection of an institution near Yorktown, Westchester county, which will cost in the neighborhood of two millions of dollars when completed, and for an addition to the Utica State Hospital which will cost more than one million dollars, as well as additions to the Long Island State Hospital which will cost half a million more. It can readily be seen that these buildings, to a large extent, would be unnecessary if it were not for the necessity of caring for alien and nonresident insane.

The fact should be emphasized that the most important reason for reducing to the lowest possible number the foreigners in our State hospitals is the difficulty of properly caring for our own insane. With steadily increasing appropriations for maintenance and new buildings, the overcrowding in the hospitals continues. The cost to the taxpayer of caring for the insane is now so great that approximately one-sixth of the State's revenues is required for this purpose. It should be stated that the proper standards of the quantity and quality of the food supplied are always maintained.

Efforts are now being made by the State Commission in Lunacy to obtain amendments to Federal laws which will prevent the coming to this country of aliens who are certain to become a charge upon the State before they become citizens. The laws enacted by Congress provide for the deportation of aliens whose insanity results from defects existing prior to their landing; for persons who have been insane within five years previous to their landing; and persons who have had two or more attacks of insanity previous to their entry into the United States.

A decision recently rendered by the Attorney-General of the United States will largely reduce the number of possible deportations. It is estimated by the Chairman of the Board of Alienists that had this decision been made one year ago, the number of cases deported through the United States Immigration Bureau would have been reduced from over three hundred and forty to about forty.

In consideration of the enormous expenditures made by the State of New York for the care and maintenance of foreign-born insane who have become burdens upon the State largely as a result of the inadequacy of existing Federal laws, the State Commission in Lunacy would suggest a thorough investigation of this subject by the Governor of the State, which might be done by a commission appointed by your Excellency for this purpose. The possibility of legislation looking toward the reimbursement of the State for the enormous expenditure made necessary in caring for persons who should have been excluded from the State by the United States Government is worthy of serious consideration.

Very respectfully,
THE STATE COMMISSION IN LUNACY,

By T. E. MCGARR,
Secretary.

We are indebted to Europe for some of the best elements introduced into our Republic and the desirability of immigration can not be questioned. It is equally true, however, that the tremendous increase in our insane population is largely a result of the admission of defectives from other countries. This constitutes a menace which is a source of grave danger to every commonwealth. The information contained in this document is published with the hope that the authorities of all states concerned will cooperate in obtaining amendments to our Federal laws which will make it possible to ameliorate a condition which is threatening in the extreme, and for the purpose of bringing about a more careful enforcement of the existing statutes.

A STATISTICAL STUDY OF THE FOREIGN BORN INSANE IN THE NEW YORK STATE HOSPITALS.

BY HORATIO M. POLLOCK,
Statistician, State Hospital Commission.

In 1904 the federal census bureau made a comprehensive study of the insane in hospitals and institutions in the United States based on an enumeration of patients made December 31, 1903. On that date there were a total of 26,176 insane patients in the various hospitals and institutions of the State. The ratio of the insane to the general population was 1 to 339. The native born insane (including those whose birthplace was unascertained) numbered 14,318 or 54.7 per cent and the foreign born, 11,858 or 45.3 per cent.

An enumeration with reference to the nativity of the patient population in the fourteen civil hospitals of the State and the two State hospitals for the criminal insane was made by the superintendents of the several hospitals February 1, 1909. At that time there were in the civil hospitals 28,547 insane patients of which 12,253 or 42.9 per cent were foreign born and in the hospitals for the criminal insane, 1,103 patients of which 504 or 45.7 per cent were foreign born. In this enumeration no attempt was made to ascertain the nationality of the foreign born patients.

A more detailed enumeration of the patient population of the sixteen hospitals of the State with reference to nativity, sex and length of time in hospitals of foreign born patients was made by the State Commission in Lunacy February 10, 1912. In the fourteen civil hospitals on that date there were 31,432 patients of which 13,163 or 41.9 per cent were foreign born. In the two hospitals for the criminal insane there were 1,230 patients, of which 546 or 44.4 per cent were foreign born.

From table 1 it is seen that although there has been an increase of 1,905 foreign born patients in the fourteen civil

TABLE 1. *A comparative statement of the native born and foreign born insane in the several State hospitals at the time of each of the three enumerations.*

Civil Hospitals	Total Population		Foreign Born Patients		Per cent, Foreign Born		
	Dec. 1903	Feb. 1909	Feb. 1912	Dec. 1903	Feb. 1909	Feb. 1912	
Utica.....	1070	1315	1555	303	376	421	27
Willard.....	2237	2305	2428	793	898	807	33
Hudson River.....	2138	2767	3066	722	911	1027	34
Middletown.....	1299	1741	2080	267	530	677	33
Buffalo.....	1633	1910	2015	763	818	865	43
Binghamton.....	1381	2185	2397	326	649	624	26
St. Lawrence.....	1728	1863	1937	617	582	550	28
Rochester.....	670	1373	1470	231	529	526	36
Gowanda.....	676	1005	1110	256	445	493	44
Mohansic.....			47			17	36
Kings Park.....	2753	3122	3518	1558	1528	1577	45
Long Island.....	1198	730	709	620	325	309	44
Manhattan.....	4066	4358	4720	2576	2480	2771	59
Central Islip.....	3519	3873	4380	2226	2187	2499	57
Total.....	24368	28547	31432	11258	12253	13163	41.9
Hospitals for Criminal Insane							
Dannemora.....	222	346	428	81	152	193	45
Matteawan.....	596	757	802	272	352	353	44
Total.....	818	1103	1230	353	504	546	44.4
				46.2	42.9		
				36	44		
				46	46		
				43.2	45.7		

hospitals since December 31, 1903, the foreign born now constitute a slightly smaller percentage of the total insane population. In the hospitals for the criminal insane there has been an increase relatively as well as numerically.

The relative decrease in the foreign born population of the hospitals of the metropolitan district is partly due to transfers to up-State hospitals and partly to the activity of the State board of alienists.

In 1900, the foreign born constituted 26 per cent of the total population of the State and in 1910, 29.9 per cent. The foreign born population of the State therefore contributes relatively a larger number of patients to the State hospitals than the native population. The ratio of relative contribution to the civil hospitals in 1903 was 2.44 to 1, and in 1912, 1.69 to 1. As children below the age of 15 years rarely become insane, a part of the relatively large contribution of foreign born patients to the State hospitals is due to the fact that the immigrants when they come to this country are largely between the ages of 15 and 40 years and therefore contain a relatively larger number of adults than the native population. As an offset, however, to the relatively greater number of adults among the foreign born is the relatively greater number of persons of advanced age among the native born. No statistics of the age distribution of the population of the State at the time of the 1910 census are available. It is therefore impossible to calculate just what allowances should be made in determining the relative frequency of insanity among the foreign born.

The study made by the federal census bureau in 1904 showed that the relative frequency of insanity among the foreign born in the various States differed in accordance with the nationalities composing the foreign born population. Taking the country as a whole however, the foreign born which in 1900 formed only 19.5 of the total population of 10 years of age and over contributed 34.3 per cent of the insane. A closer comparison of the relative frequency of insanity among nationalities will be found in the analysis of first admissions from New York City.

The nationality of the insane population in the State varies as the tide of immigration shifts from one section of Europe to another. Until recent years the greater part of the immigrants settling in New York State came from Ireland and Germany. During the past decade these peoples have practically ceased to immigrate but instead large numbers have come to the State from Austria-Hungary, Russia and Italy. The change in the character of the insane population is indicated by the following table although the residue population of Irish and Germans is still large.

The above table shows that relatively there has been a decrease in the insane population from Ireland, Germany, and England and Wales, and an increase in the insane population from Russia and Poland, Italy, and Hungary and Bohemia. The census bureau's report of 1904 did not give separately the number of patients born in Austria. This country now contributes 4.5 per cent of the population of the civil hospitals and 5.3 per cent of the population of the hospitals for the criminal insane.

The relatively large contribution of Italy to the population of the hospitals for the criminal insane is worthy of comment. Although the Italians constitute but 5 per cent of the foreign born insane population of the civil hospitals they number 23.1 per cent of the foreign born of the hospitals for the criminal insane. This nationality also contributes largely to the prison population of the State. The report of the State Superintendent of Prisons for the year ending September 30, 1910, shows that the Italians constitute 36.6 per cent of the foreign born prison population of the State.

Relatively the Germans and Irish contribute a much smaller percentage of insane with criminal tendencies.

SEX.

In the civil State hospitals the females outnumber the males both among the native born and among the foreign born. In the State hospitals for the criminal insane the males are greatly in excess of the females. The census of February 10, 1912, gives the distribution by sex as follows:

TABLE 2. *Comparative statement of the nativity of the foreign born insane in New York State.*

Country of Birth	Total Insane in Institutions Dec. 31, 1903		Insane in Civil Hospitals Feb. 10, 1912.		Insane in Hospitals for Criminal Insane Feb. 10, 1912	
	Number	Per cent of Foreign Pop- ulation	Number	Per cent of Foreign Pop- ulation	Number	Per cent of Foreign Pop- ulation
Austria.....	—	—	593	4.5	29	5.3
Canada.....	454	3.8	486	3.7	22	4.
England and Wales.....	721	6.1	731	5.6	30	5.5
France.....	161	1.4	136	1.	1	.2
Germany.....	3044	25.7	3179	24.2	93	17.
Hungary and Bohemia.....	271	2.3	457	3.5	14	2.6
Ireland.....	4777	40.3	4270	32.	111	20.3
Italy.....	433	3.6	655	5.	126	23.1
Russia and Poland.....	809	6.8	1515	11.5	69	12.6
Scandinavia.....	387	3.3	442	3.4	10	1.8
Scotland.....	158	1.3	163	1.2	1	.2
All other countries.....	643	5.4	537	4.1	40	7.3
Total.....	11858	100	13163	100	546	100

TABLE 3. *Distribution by sex of the insane patient population of the State Hospitals, February 10, 1912.*

Nativity	Patients in the 14 Civil Hospitals				Patients in the Two Hospitals for the Criminal Insane			
	Number		Per cent		Number		Per cent	
	Male	Female	Male	Female	Male	Female	Male	Female
Total patients.....	14697	16735	46.8	53.2	1098	132	89.3	10.7
Native born.....	8992	9367	49	51	611	73	89.3	10.7
Total foreign born.....	5695	7468	43.3	56.7	487	59	89.2	10.8
Austria.....	292	301	49.3	50.7	28	1	96.6	3.4
Canada.....	208	278	42.8	57.2	19	3	86.4	13.6
England and Wales.....	344	387	47.1	52.9	26	4	86.7	13.3
France.....	61	75	44.9	55.1	1	—	100	—
Germany.....	1407	1772	44.3	55.7	80	13	86	14
Hungary and Bohemia.....	191	266	41.8	58.2	14	—	100	—
Ireland.....	1453	2817	34	66	83	28	74.8	25.2
Italy.....	394	261	60.2	39.8	122	4	96.8	3.2
Russia and Poland.....	783	732	51.7	48.3	66	3	95.7	4.3
Scandinavia.....	194	248	43.9	56.1	9	1	90	10
Scotland.....	69	94	42.3	57.7	1	—	100	—
All other countries.....	299	238	55.7	44.3	38	2	95	5.

Table 3 shows an excess of females among the native born in the civil hospitals and an excess of males in the hospitals for the criminal insane, but the total native born males in both classes of hospitals exceed the females by 163. Among the foreign born the females are largely in excess of the males, except in those nationalities that constitute the bulk of recent immigration. In these, the males are in excess due no doubt to the greater number of males among such immigrants. As will be shown later the males among the first admissions exceed the females but the greater average hospital life of the females more than counterbalance such excess. The females among the Irish constitute an exceptionally large part of the insane of that nationality. This is true among first admissions as among the patients remaining in the hospitals.

The few females among the criminal insane corresponds with the comparatively few female criminals among the normal population.

LENGTH OF TIME IN HOSPITALS FOR THE INSANE.

The federal census of December 31, 1903, showed the following data relative to the length of time spent in hospitals for the insane by patients in institutions in New York State.

TABLE 4. *Period of hospital residence, census of December 31, 1903.*

Length of time	Males	Females	Total
Under 1 year.....	4182	4153	8335
1 year.....	1207	1163	2370
2 years.....	1050	1042	2092
3 years.....	812	894	1076
4 years.....	771	861	1632
5-9 years.....	2897	3171	6068
10-14 years.....	2209	2421	4630
15-19 years.....	933	1025	1958
20 and over.....	859	1116	1975
Years unknown.....	1001	1039	2040

That the hospital life of the females averages somewhat longer than that of the males is evidenced by the preponderance of the males in the shorter periods and the preponderance of the females in the longer periods.

In the census of February 10, 1912, a definite report of the total length of hospital life in years, months and days of each foreign born patient in the State hospitals was secured. The averages tabulated according to hospital and sex show the following results.

TABLE 5. *Length of time spent in hospitals by foreign born patients.*

Civil Hospitals	Average Period in Years in Hospitals for the Insane		
	Males	Females	Total
Utica.....	7.6	8.3	8.
Willard.....	15.9	17.3	16.6
Hudson River.....	7.8	10.3	9.4
Middletown.....	7.6	6.4	6.7
Buffalo.....	11.2	12.3	11.8
Binghamton.....	13.7	16.8	14.6
St. Lawrence.....	10.2	11.3	10.8
Rochester.....	9.2	12.6	11.3
Gowanda.....	10.6	17.7	13.8
Mohansic.....	17.1	....	17.1
Kings Park.....	7.1	10.3	9.2
Long Island.....	8.	10.3	9.5
Manhattan.....	7.2	7.9	7.6
Central Islip.....	9.6	7.5	8.7
Total.....	9.54	10.08	9.85
Hospitals for Criminal Insane			
Dannemora.....	5.3	—	5.3
Matteawan.....	11.2	9.	10.9
Total.....	8.8	9.	8.8

The table shows that the females among the foreign born stay somewhat longer in the hospitals than the males, the average period in the civil hospitals being 9.54 years for the males and 10.08 years for the females. The average period of hospital residence of the patients in the civil hospitals at the time of the enumeration was 9.85 years. As a large part of the present foreign population is made up of recent admissions, the complete average period of hospital life would be considerable longer than the present period of residence.

The average period of residence of the patients in the hospitals for the criminal insane is shorter than that of the patients in the civil hospitals but the difference is not so marked that any definite conclusion can be drawn therefrom.

FIRST ADMISSIONS TO THE CIVIL STATE HOSPITALS.

During the year ending September 30, 1911, there were 5,700 first admissions to the fourteen State hospitals for the insane, an increase of 136 over the previous year. Grouped according to nativity and sex the first admissions appear as follows:

TABLE 6. *First admissions, 1911, grouped according to sex and nativity.*

	Number			Per cent		
	Males	Females	Total	Males	Females	Total
Native born.....	1565	1358	2923	51.94	50.54	51.28
Foreign born.....	1426	1311	2737	47.33	48.79	48.02
Nativity unascertained	22	18	40	.73	.67	.76
Total.....	3013	2687	5700	100	100	100

From this tabulation it is seen that of the males the foreign born constitute 47.33 per cent, of the females 48.79 per cent, and of the total 48.02. If only the patients whose nativity is ascertained are considered the foreign born constitute 48.36 per cent of the whole number as compared with 46.2 per cent in 1910 and 46.3 per cent in 1909. The relative increase of foreign born first admissions in 1911 over the two preceding years is therefore approximately 2 per cent. Of the 5,700 first admissions only 1,224 or 21.47 per cent were native born of native parentage, while 1,481 were native born of foreign or mixed parentage. *No less than 4,218 patients were either foreign born or children of parents one or both of whom were foreign born. Taking the two generations into consideration the foreign element contributed 74 per cent of the first admissions.*

Comparing the percentages of nativity among the first admissions with the percentages among the general population we find that the native born population which constituted 70.1 per cent of the whole contributes 51.28 per cent of the first admissions, while the foreign born population which constitutes 29.9 per cent of the whole contributes 48.02 per cent of the first admissions. *The fre-*

quency of insanity among the foreign born throughout the State is therefore 2.19 times as great as among the native born.

The various nationalities were represented among the foreign born first admissions as follows :

TABLE 7. *Nationality of foreign born first admissions, 1911.*

Nationality	Number	Per cent of Total Foreign Born
Austria.....	219	8.0
Canada.....	119	4.3
England and Wales.....	135	4.9
France.....	36	1.3
Germany.....	488	17.7
Hungary and Bohemia.....	129	4.7
Ireland.....	586	21.4
Italy.....	261	9.5
Russia and Poland.....	456	16.7
Scandinavia.....	84	3.1
Scotland.....	38	1.4
All other countries.....	186	6.8
Total.....	2737	100.0

Comparing the percentages shown in the above table with those given in Table 2 it is seen that Austria, Italy and Russia and Poland contribute a much larger part of the first admissions of 1911 than of the total insane population of the State hospitals. Germany and Ireland on the contrary contribute a larger part to the total population.

The percentages are as follows:

TABLE 8. *Comparison of the contributions of certain countries to the first admissions, 1911, and to the total insane in the State hospitals.*

Country	Per cent of First Admissions 1911	Per cent of Population of Civil Hospitals 1912
Austria.....	8.0	4.5
Italy.....	9.5	5.0
Russia and Poland.....	16.7	11.5
Germany.....	17.8	24.2
Ireland.....	21.4	32.0

These figures clearly indicate the trend of recent immigration.

FIRST ADMISSIONS, WITH RESIDENCE IN NEW YORK CITY.

Of the total first admissions, 3,221 were residents of New York City at the time of admission. Of these, 2,006 or 64.1 per cent were of foreign birth. The foreign born

population of the city according to the federal census of 1910 constitutes 40.4 per cent of the whole.

Only 358 or 11.1 per cent of the 3,221 first admissions were native born of native parents.

TABLE 9. *Number and rate of first admissions with residence in New York City, classified according to nativity, 1911.*

Nativity	Number of First Admissions	Rate of First Admissions. Per 100,000 of Population. Census of 1910.
Native born.....	1195	42
Total foreign born.....	2006	104
Austria-Hungary.....	281	106
Canada.....	38	142
Great Britain.....	91	86
Germany.....	350	125
Ireland.....	434	172
Italy.....	193	57
France.....	30	165
Russia.....	379	78

The foreign born of every nationality show a higher rate of insanity than the native born. As some of the nationalities have a larger percentage of persons of advanced age than others it is probable that the differences in rate of insanity by age-groups would not be as marked as those shown in the table.

The rate of insanity among the total foreign born in New York City is 2.48 times that of the native born.

TABLE 10. *Length of time in the United States before commitment of foreign born first admissions, 1911.*

Length	Number Patients Residing in New York City	Total in New York State
Under 1 month.....	10	14
1-2 months.....	21	24
3-5 months.....	28	33
6-11 months.....	47	59
1 year.....	62	80
2 years.....	69	95
3 years.....	60	91
4 years.....	96	123
5 years.....	115	134
6-9 years.....	221	276
10-14 years.....	225	284
15-19 years.....	192	249
20 years and over.....	778	1,138
Unascertained.....	82	147
Total.....	2,006	2,737

Of the first admissions from New York City, 237 entered the hospital before having been in this country three years, and 393 before having been here five years. For the whole State the numbers are 305 and 509, respectively.

To these early admissions various nationalities contributed as follows:

TABLE 11. *First admissions of various nationalities committed before having been in the United States five years.*

	Patients Residing in New York City		Total in New York State	
	Number	Per cent	Number	Per cent
Austria.....	53	13.5	73	14.3
Canada.....	5	1.3	13	2.5
England and Wales.....	8	2.	14	2.7
France.....	7	1.8	7	1.4
Germany.....	34	8.7	41	8.1
Hungary and Bohemia....	28	7.1	32	6.3
Ireland.....	31	7.9	36	7.1
Italy.....	49	12.5	69	13.6
Russia and Poland.....	113	28.8	142	27.9
Scandinavia.....	16	4.1	20	3.9
Scotland.....	3	.8	6	1.2
All other foreign countries,	46	11.7	56	11.0
Total.....	393	100	509	100

This table shows conclusively that the larger part of the immigrants who are admitted to hospitals for the insane within five years after landing come from Austria-Hungary, Italy, Russia and Poland.

TABLE 12. *Degree of literacy of first admissions, 1911.*

Degree of Literacy	Native Born	Foreign Born	Total
None.....	135	374	509
Reads and writes.....	376	716	1,092
Common school.....	2,091	1,427	3,518
High school.....	236	69	305
Collegiate.....	54	18	72
Unascertained.....	31	133	164
Total.....	2,923	2,737	5,660

Of the foreign born first admissions 374 are reported as having no education as compared with 135 of the native born; 716 foreign born patients read and write as compared with 376 native born. Thus 1,090 or 40 per cent of the foreign born first admissions have less than a common

school education as compared with 511 or 17.5 per cent of the native born.

The foreign born illiterates are distributed among the various nationalities as follows:

TABLE 13. *Distribution of foreign born illiterates among first admissions, 1911.*

Country	Number	Per cent of Total Admissions of each Country
Austria.....	125	59.4
Canada.....	30	25.2
England and Wales.....	25	18.7
France.....	8	22.2
Germany.....	94	19.2
Hungary and Bohemia.....	51	39.5
Ireland.....	249	42.5
Italy.....	160	53.6
Russia and Poland.....	256	56.1
Scandinavia.....	23	27.6
Scotland.....	4	10.5
All other foreign countries.....	65	35
Total.....	1090	40.

The table shows that the largest percentages of illiterate insane are coming from Austria, Italy and Russia and Poland, the first country leading with a percentage of 59.4 per cent.

AGE.

TABLE 14. *Ages of first admissions classified according to nativity, 1911.*

Age-Group	Native Born		Foreign Born	
	Number	Per cent of total	Number	Per cent of total
Under 15 years.....	13	.4	1	—
15-19 years.....	169	5.6	113	4.1
20-24 years.....	302	10.3	305	11.1
25-29 years.....	332	11.4	343	12.5
30-34 years.....	326	11.2	321	11.7
35-39 years.....	341	11.7	284	10.4
40-44 years.....	294	10.1	305	11.1
45-49 years.....	274	9.4	223	8.1
50-54 years.....	239	8.2	205	7.5
55-59 years.....	181	6.2	141	5.2
60-64 years.....	118	4.	133	4.9
65-69 years.....	109	3.7	119	4.3
70-74 years.....	88	3.	102	3.7
75-79 years.....	69	2.4	73	2.7
80 and over.....	56	1.9	50	1.8
Unascertained.....	12	.4	19	.7
Total.....	2923	100	2737	100

The table shows no marked differences between the percentages of native born and foreign born in the various age-groups. Six per cent of the native born were under the age of twenty when admitted as compared with 4.1 per cent of the foreign born. Fifty-four and seven-tenths per cent of the native born and 56.8 per cent of the foreign born were admitted between the ages of twenty and forty-five.

Taking the separate nationalities among the foreign born, we note a much wider divergence in the percentages admitted in the various age-groups.

TABLE 15. *Comparison of ages of first admissions of various nationalities, 1911.*

Age-Group	Germany		Ireland		Austria-Hungary		Italy		Russia	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
15-19 years.....	2	.4	6	1.	29	8.3	15	5.7	48	10.5
20-24 years.....	25	5.1	22	3.7	60	17.2	41	15.7	106	23.2
25-29 years.....	38	7.8	47	8	63	18.1	43	16.5	87	19.1
30-34 years.....	39	8	53	9	50	14.3	37	14.2	57	12.5
35-39 years.....	43	8.8	56	9.5	43	12.4	23	9.2	43	9.4
40-44 years.....	67	13.7	78	13.2	36	10.3	29	11.1	33	7.2
45-49 years.....	49	10.	58	9.8	22	6.3	18	6.9	27	5.9
50-54 years.....	47	9.6	53	9.	19	5.5	14	5.4	16	3.5
55-59 years.....	43	8.8	33	5.6	10	2.9	16	6.1	7	1.5
60-64 years.....	38	7.8	38	6.5	5	1.4	7	2.7	14	3.1
65-69 years.....	31	6.1	48	8.1	—	—	8	3.1	6	1.3
70-74 years.....	24	4.9	50	8.5	4	1.1	—	—	3	.7
75-79 years.....	28	5.7	26	4.4	1	.3	2	.8	3	.7
80 and over.....	13	2.7	16	2.7	1	.3	5	2.1	3	.7
Unknown.....	1	.2	5	.8	5	1.4	2	.8	3	.7
Total.....	481	100	589	100	348	100	261	100	456	100

In the groups between 20 and 35 years there is relatively a much larger percentage of Austrians, Hungarians, Italians and Russians than Germans and Irish. The latter nationalities, however, contribute relatively more to the advanced age-groups. It is noteworthy that 54.8 per cent of the Russians admitted were between 20 and 35 years of age, and that 72.3 per cent of the Austrians and Hungarians were between 20 and 45 years of age. The relatively large number of the latter races admitted early in life is undoubtedly due to their large representation in recent immigration. The bulk of the Irish and German population of the State has resided here several years. The general average age of these immigrants is probably higher than that of the native born population. We should, therefore, expect a considerable contribution from these nationalities to the advanced age-groups. Reference to the table shows such to be the case.

Forty-five and six-tenths per cent of the Germans and 44.8 per cent of the Irish admitted were over 50 years of age at the time of admission, while only 29.4 per cent of the native born, 11.5 per cent of the Russians, 22.2 per cent of the Italians and 11.5 per cent of the Austrians and Hungarians had passed the half century mark.

The classification of the native born and foreign born first admissions with reference to psychoses gives the following results:

PSYCHOSES.

TABLE 16. *Psychoses of first admissions classified according to nativity, 1911.*

Psychosis	Native Born		Foreign Born	
	Number	Per cent	Number	Per cent
With brain tumor.....	3	.1	6	.2
Traumatic.....	7	.2	7	.3
Senile.....	274	9.4	306	11.2
Dementia paralytica.....	368	12.6	384	14.
With other brain or nervous diseases.....	164	5.6	108	3.9
Alcoholic.....	300	10.3	278	10.2
Drug and other toxic.....	19	.7	8	.3
Infective-exhaustive and auto-toxic.....	70	2.4	74	2.7
Allied to infective-exhaustive..	5	.2	21	.8
Symptomatic depressions.....	7	.2	8	.3
Depressive hallucinosis.....	5	.2	32	1.2
Involution melancholia.....	94	3.2	49	1.8
Depressions undifferentiated...	82	2.8	113	4.1
Dementia præcox.....	511	17.5	394	14.4
Allied to dementia præcox.....	38	1.3	80	2.9
Paranoic conditions.....	102	3.5	116	4.2
Manic-depressive.....	310	10.6	324	11.8
Allied to manic-depressive.....	88	3.1	100	3.6
Epileptic.....	94	3.2	39	1.4
Hysterical, psychasthenic and neurasthenic.....	57	1.9	9	.3
Other constitutional disorders and inferiorities.....	95	3.3	68	2.5
Imbecility and idiocy with insanity.....	62	2.1	20	.7
Unclassified.....	103	3.5	170	6.2
Not insane.....	65	2.2	23	.8
Total.....	2923	100	2737	100

The table indicates a general correspondence in mental disease among the native born and the foreign born. Senility, general paresis, alcoholism, dementia præcox and manic-depressive insanity are the commonest forms of mental disorders in both groups. Eleven and two-tenths per cent of the foreign born first admissions are seniles as compared with 9.4 per cent among the native born. Fourteen per cent of the paretics are foreign born and 12.6 per cent native born. Dementia præcox is the assigned mental disorder in 17.5 per cent of the native born cases and of 14.4 per cent of the foreign born. Ten and six-tenths per cent of the native born are manic-depressives and 11.8 per cent of the foreign born. Alcoholics form practically the same propor-

tion of the native born and foreign born admissions, the percentages being 10.3 and 10.2 respectively.

The percentages of cases of the five principal mental disorders among the first admissions with residence in New York City varied considerably from those above given for the whole State. The following table shows the results obtained by a classification of the patients of the metropolis.

TABLE 17. *Comparison of frequency of certain psychoses among native born and foreign born first admissions with residence in New York City, 1911.*

Psychosis	Native Born		Foreign Born	
	Number	Per cent	Number	Per cent
Dementia paralytica.....	195	16.3	314	15.7
Alcoholic.....	142	11.9	186	9.3
Dementia præcox.....	232	19.4	279	13.4
Senile.....	58	4.9	183	9.1
Manic-depressive.....	122	10.2	266	13.3

A detailed classification according to nativity of the cases of dementia paralytica among first admissions with residence in New York City is shown in the following table.

TABLE 18. *Comparison of frequency of dementia paralytica among first admissions with residence in New York City, classified according to nativity, 1911.*

Nativity	Number of Cases			Per cent of Total Cases of each Country		
	Male	Female	Total	Male	Female	Total
United States.....	128	67	195	21.4	11.3	16.3
Total foreign countries...	233	81	314	23.2	8.1	15.7
Austria.....	14	5	19	18.4	5.4	11.3
Canada.....	5	3	8	35.7	17.6	25.8
England and Wales.....	9	5	14	23.7	15.2	19.7
France.....	5	2	7	26.3	18.1	23.3
Hungary and Bohemia...	20	9	29	35.7	15.8	25.7
Germany.....	49	25	74	28	14.3	21.1
Ireland.....	26	14	40	14.7	5.4	9.2
Italy.....	30	5	35	26.1	6.4	20.7
Russia.....	46	5	51	23.4	2.7	13.5
Scandinavia.....	6	2	8	21.4	5	11.8
Scotland.....	6	1	7	42.8	16.7	35
All other foreign countries	17	5	22	17.5	9.6	14.7
Unascertained.....	3	1	4	25	10	18.2

The table shows a comparatively high rate of paresis among patients coming from Scotland, Canada, Hungary and Bohemia, and France, although the percentages shown, owing to the small number of cases, are not fairly representative of the various nationalities.

Paresis among men of all nationalities is shown to be more frequent than among women.

A similar comparison of the frequency of the alcoholic psychosis is shown in the following table.

TABLE 19. *Comparison of frequency of alcoholic psychosis among first admissions with residence in New York City, classified according to nativity, 1911.*

Nativity	Number of Cases			Per cent of Total Cases of each Country		
	Male	Female	Total	Male	Female	Total
United States.....	99	43	142	16.6	7.2	11.9
Total foreign countries...	131	55	186	13	5.5	9.3
Austria.....	7	2	9	9.2	2.2	5.4
Canada.....	4	2	6	28.6	11.8	19.4
England and Wales.....	10	4	14	26.3	12.1	19.7
France.....	3	..	3	15.8	....	10
Germany... ..	25	6	31	14.3	3.4	8.8
Hungary and Bohemia...	6	2	8	10.7	3.5	7.1
Ireland.....	51	34	85	28.8	13.2	19.6
Italy.....	6	..	6	5.2	....	3.1
Russia	4	1	5	2	5	1.3
Scandinavia.....	6	3	9	21.4	7.5	13.2
Scotland.....	4	..	4	28.6	....	20
All other foreign countries	5	1	6	5.2	1.9	4
Unascertained.....	1	..	1	8.3	....	4.5

The table shows a large representation of alcoholics among admissions from Ireland, Scotland, Canada, England and Wales, and Scandinavia. It is noteworthy that Ireland with only 9.2 per cent of cases of dementia paralytica has 19.6 per cent of alcoholic cases, while Russia with 13.5 per cent of cases of dementia paralytica has but 1.3 per cent of cases of alcoholism. Italy and Austria also have each a low percentage of alcoholics.

The rate of frequency of paresis and alcoholic insanity among the inhabitants of the city of New York of the various nationalities, is indicated in the following table:

TABLE 20. *Rate of frequency of dementia paralytica and alcoholic insanity among first admissions of various nationalities residing in New York City, 1911.*

Country of Birth	Cases of Dementia Paralytica		Cases of Alcoholic Insanity	
	Number	Rate per 100,000 of Population 1910	Number	Rate per 100,000 of Population 1910
United States.....	195	7	142	5
All foreign countries....	314	16	186	10
Austria-Hungary.....	48	18	17	6
Canada.....	8	30	6	22
England and Wales.....	14	18	14	18
France.....	7	38	3	16
Germany.....	74	26	31	11
Ireland.....	40	16	85	34
Italy.....	35	10	6	2
Russia.....	51	11	5	1
Scandinavia.....	8	14	9	16
Scotland.....	7	27	4	15

As seen from the above table the number of paretics and alcoholics in proportion to the population is much greater among the foreign born than among the native born. In the paretics the ratio of frequency of the foreign born to the native born, is 16 to 7 and in the alcoholics 10 to 5.

Immigrants from France, Canada, Scotland and Germany show high rates of frequency of paresis while those from Ireland, Canada, England and Wales, Scandinavia and France show high rates of alcoholic insanity. The low rate of frequency of alcoholic insanity among the Russians, Italians, Austrians and Hungarians is noteworthy.

ENVIRONMENT.

The environment of the first admissions of the whole State is shown by the following tabulation:

TABLE 21. *Environment of first admissions classified according to nativity, 1911.*

Environment	Native Born		Foreign Born	
	Number	Per cent	Number	Per cent
City.....	1973	67.5	2427	88.7
Village.....	634	21.7	186	6.8
Rural.....	283	9.7	75	2.7
Unascertained	33	1.1	49	1.8
Total.....	2923	100	2737	100

From the figures given it is evident that much the larger part of the insane entering the hospitals at present are residents of cities. Of the foreign born 88.7 per cent lived in cities at the time of admission as compared with 67.5 per cent of the native born. Only 2.7 per cent of the foreign born first admissions came from rural districts and only 9.7 per cent of the native born.

READMISSIONS.

During the year ending September 30, 1911, there were admitted to the civil State hospitals 1,560 patients who had previously been in an institution for the insane. The nativity of these patients and of their parents is given by the following table:

TABLE 22. *Nativity of readmissions, and of parents of readmissions year ending September 30, 1911.*

Nativity	Patients		Total	Parents of Male Patients			Parents of Female Patients		
	Male	Female		Both	Father	Mother	Both	Father	Mother
New York.....	395	349	744	147	181	192	113	132	144
Other states—U. S.....	107	133	240	65	102	85	71	92	81
Total native.....	502	482	984	212	283	277	184	224	225
Austria.....	22	16	38	25	26	26	23	25	24
Canada.....	17	15	32	8	14	14	10	14	21
England and Wales.....	22	24	46	24	37	36	31	50	37
Germany.....	47	58	105	94	100	100	119	134	124
Hungary and Bohemia.....	9	7	16	9	10	9	8	8	9
Ireland.....	50	87	137	143	157	161	187	194	206
Italy.....	21	20	41	27	28	27	22	22	23
France.....	1	1	2	2	7	2	2	5	3
Scotland.....	3	4	7	6	10	9	5	10	9
Scandinavia.....	5	12	17	7	7	9	12	12	12
Russia.....	36	61	97	44	44	45	73	76	75
All other countries.....	22	13	35	20	24	25	14	15	17
Total foreign countries.....	255	318	573	409	464	463	506	565	560
Unascertained.....	1	2	3	9	11	18	13	13	17
Grand total.....	758	802	1560	630	758	758	703	802	802

As shown by the table 984 or 63.1 per cent of the readmissions were native born and 573, or 36.8 per cent foreign born, while the birthplace of three patients could not be ascertained. Both parents of only 496 patients or 31.8 per cent of the whole number of readmissions were native born.

Of the 1,560 readmissions 806 were residents of New York City at the time of admission. Of the latter 416 or 51.6 per cent were foreign born. *Both parents of only 100 or 12.4 per cent of the New York City readmissions were native born.*

A classification of the New York City readmissions with respect to nativity, sex and parentage is shown in the following table:

TABLE 23. *Nativity of readmissions with residence in New York City and of parents of readmissions, year ending September 30, 1911.*

Nativity	Male	Female	Total	Parents of Male Patients			Parents of Female Patients		
				Both	Father	Mother	Both	Father	Mother
New York.....	144	115	259	21	34	42	9	14	17
Other States—U. S.....	50	78	128	27	43	40	43	49	49
Total native.....	194	193	387	48	77	82	52	63	64
Austria.....	18	15	33	21	21	22	22	23	23
Canada.....	3	1	4	1	1	3	—	—	1
England and Wales.....	10	17	27	11	16	16	15	21	17
Germany.....	29	42	71	60	66	63	75	81	78
Hungary and Bohemia.....	6	6	12	6	7	6	7	7	8
Ireland.....	36	72	108	80	88	87	128	131	136
Italy.....	17	17	34	22	22	22	18	18	19
France.....	1	1	2	2	5	2	2	2	2
Scotland.....	1	2	3	1	1	1	1	3	1
Scandinavia.....	4	12	16	5	5	5	12	12	12
Russia.....	32	45	77	36	36	37	55	57	56
All other countries.....	19	10	29	16	20	17	10	10	11
Total foreign countries.....	176	240	416	261	288	281	345	365	364
Unascertained.....	1	2	3	6	6	8	7	7	7
Grand total.....	371	435	806	315	315	371	371	404	435

Comparing the nationality of the readmissions with that of the first admissions we note that the foreign born are relatively less numerous among the readmissions. The numbers and percentages for the whole State and for New York City are as follows:

TABLE 24. *Comparison of first admissions and readmissions with respect to nativity.*

	Whole State				New York City			
	Native Born		Foreign Born		Native Born		Foreign Born	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
First admissions.....	2923	51.28	2737	48.2	1193	37	2006	63
Readmissions.....	984	63.1	573	36.8	387	48	416	51.6
Total, nativity ascertained.....	3907	53.8	3310	45.6	1580	39.2	2422	60.1

NOTE. The nativity of 40 first admissions and 3 readmissions was unascertained. The percentages are based on the totals including the unascertained.

SUMMARY.

From the foregoing study the following conclusions may be drawn:

1. The number of foreign born insane in the State hospitals is steadily increasing.

2. The foreign born population of the State contributes relatively a much larger number of patients to the State hospitals than the native born.

3. The nationality of the foreign born patient population of the State hospitals is gradually changing. The proportion of Irish and Germans is diminishing and the proportion of Austrians, Hungarians, Italians and Russians is increasing.

4. Although the rate of insanity among the Italians is low this nationality contributes an unusually large proportion of patients to the State hospitals for the criminal insane.

5. The number of female patients in the civil State hospitals exceeds the male both among the native born and the foreign born; the male patients on the other hand greatly exceed the female in the hospitals for the criminal insane.

6. The average total hospital residence of the foreign born insane patients is 9.85 years.

7. The hospital life of the females is longer than that of the males.

8. There was a relative as well as absolute increase in the number of foreign born first admissions in 1911.

9. The first admissions of 1911 show a rate of insanity 2.19 times as great among the foreign born population of the State as among the native born.

10. The percentage of foreign born among first admissions from New York City is much higher than among those from other parts of the State.

11. The rate of insanity among the foreign born of New York City is 2.48 times that of the native born.

12. About one-fifth of the foreign born first admissions of 1911 entered a State hospital before having been in the State five years.

13. The larger part of the immigrants who are admitted to a State hospital within five years after landing come from Austria-Hungary, Italy and Russia.

14. The foreign born first admissions show a higher rate of illiteracy than the native born.

15. The largest percentages of foreign born illiterates are found among the Austrians, Russians and Italians.

16. The average age of the foreign born first admissions is practically equal to that of the native born.

17. The first admissions born in Austria, Italy and Russia average younger than those born in Germany and Ireland.

18. There is a general correspondence among the native born patients and the foreign born patients with respect to the various forms of mental disease.

19. There is a high rate of paresis among patients coming from Scotland, Canada, Hungary and Bohemia and France.

20. There is a high rate of alcoholic insanity among patients coming from Ireland, Great Britain, Canada and Scandinavia.

21. Cases of general paresis and of alcoholic insanity are relatively more frequent among the foreign born than among the native born population.

22. Much the larger part of the insane now entering the hospitals are residents of cities.

23. A larger proportion of the foreign born insane are residents of cities than of the native born.

24. The proportion of foreign born patients among readmissions is less than among first admissions.

CHART 1. *Insanity rate per 100,000 of population of various nationalities residing in New York City, based on first admissions to the State hospitals, 1911.*

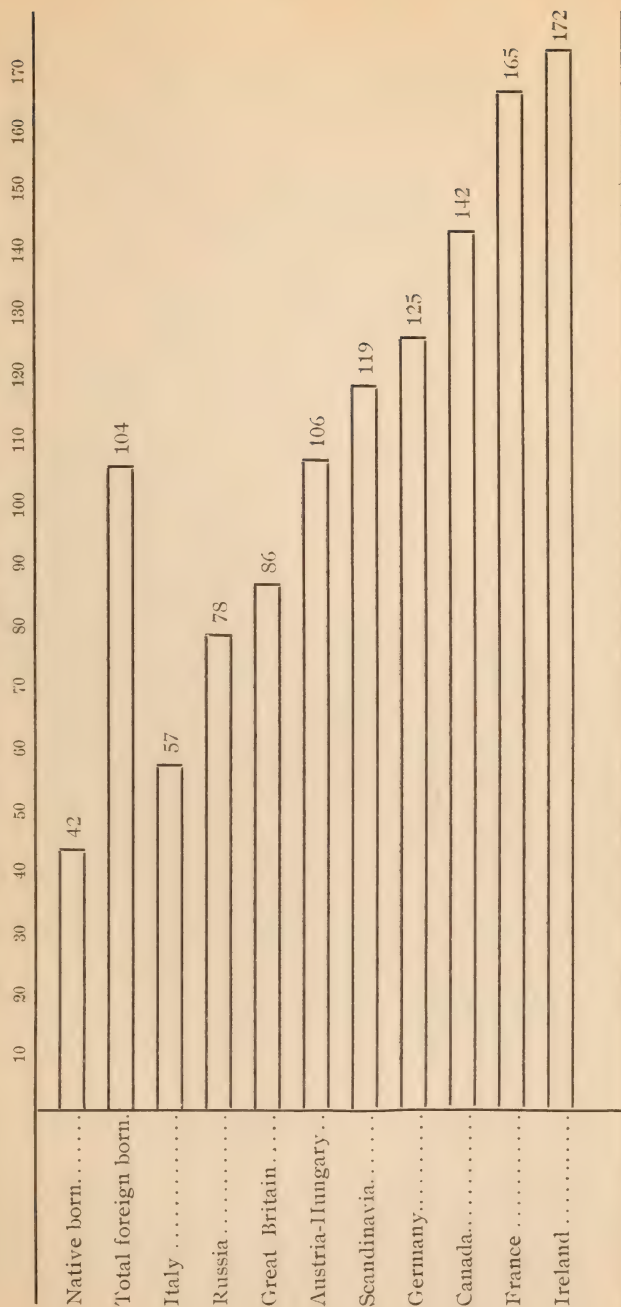


CHART 2. *Rate of frequency of general paralysis per 100,000 of population of various nationalities residing in New York City, based on first admissions to the State hospitals, 1911.*

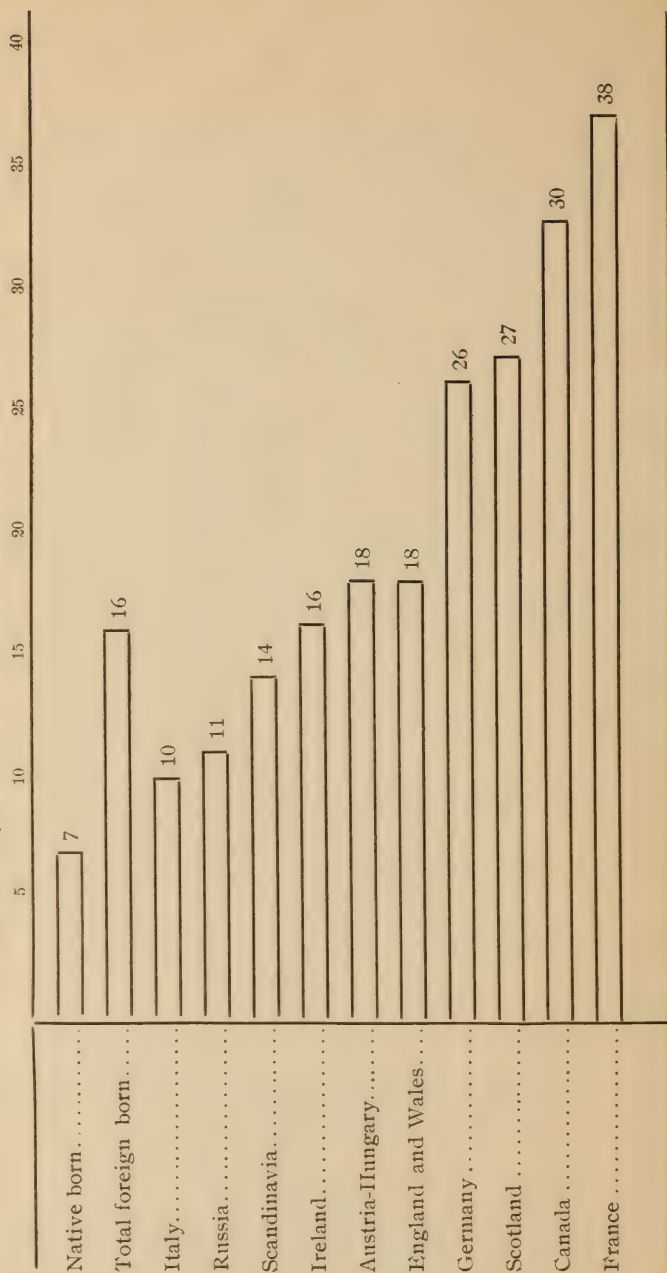
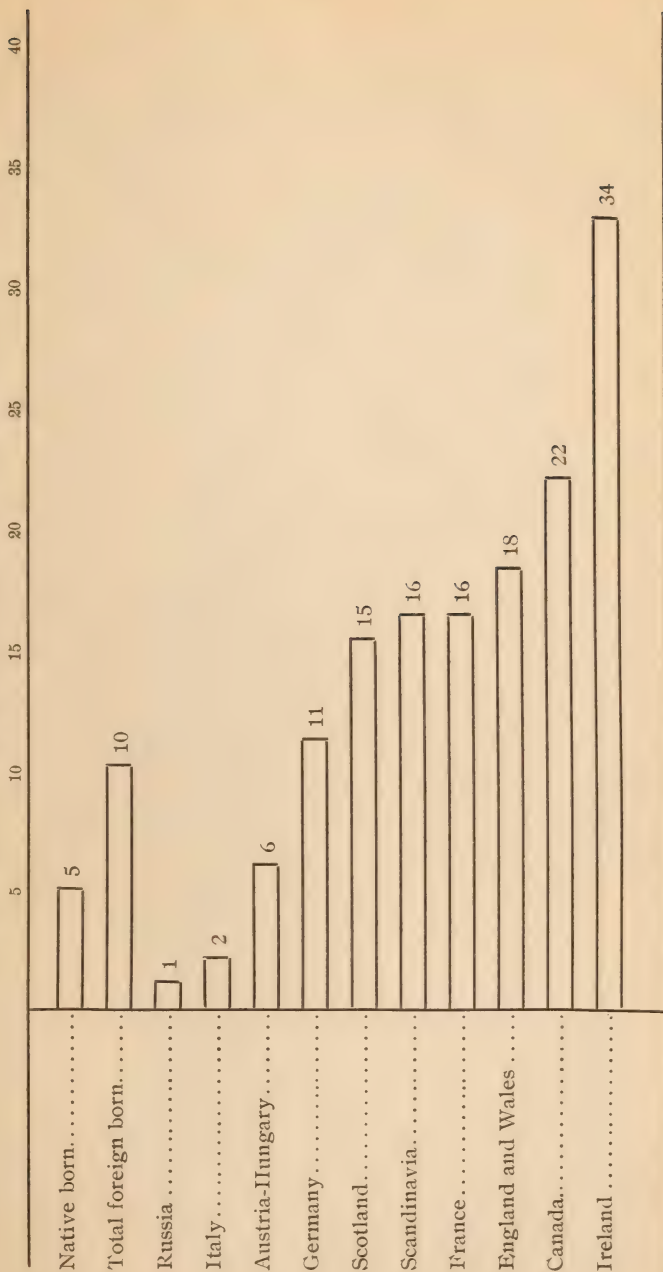


CHART 3. *Rate of frequency of alcoholic insanity per 100,000 of population of various nationalities residing in New York City, based on first admissions to the State hospitals, 1911.*



THE COST TO THE STATE OF NEW YORK OF THE MAINTENANCE OF AN INSANE PATIENT.

BY HORATIO M. POLLOCK,
Statistician, State Hospital Commission.

In order to determine the burden placed upon the State of New York by the maintenance of foreign born and non-resident insane patients in the State hospitals, an effort has been made to ascertain as accurately as possible, the cost to the State of the maintenance of an average patient.

Four principal elements enter into the determination of the cost of caring for the insane.

First, The cost of the hospital plant, that is, the land, buildings and equipment necessary to care for and treat the insane patients.

Second, The maintenance of the patients while in the hospitals. This includes food, clothing, medical treatment, attendance and supervision.

Third, The cost to the State of the general administration of the hospitals, including inspection, supervision of accounts and scientific investigation of causes of and methods of treatment of insanity.

Fourth, The length of time that the average patient remains in the hospitals.

THE COST OF THE HOSPITAL PLANT.

As the State hospitals for the insane date their beginning from 1843 and have been expanded by the taking over of county institutions already in operation and by the building of new plants and the enlargement of those already established, it becomes extremely difficult to determine the actual cost to the State of the property now being used for the benefit of the insane. If such cost could be determined, it would be almost meaningless on account of the many changes that have occurred by buildings becoming anti-

quoted and being replaced and by the remodeling and repairing of old buildings. For the past twenty years the superintendent of each State hospital has reported annually an estimate of the value of the hospital plant under his supervision. The value of the land of the Long Island State Hospital which belongs to Kings County has not been included in such reports. Excluding this institution on that account, a compilation of the estimates of the superintendents for the past eleven years, shows the following results:

** Comparative statement of the property of the State hospitals as reported annually by the superintendents, 1901-1911.*

Year	Number of Patients	Value of Property	Investment Per Capita
1901.....	21461	\$23,794,519	\$1,109
1902.....	22063	24,282,868	1,101
1903.....	22987	24,643,683	1,072
1904.....	23820	25,077,683	1,053
1905.....	24445	25,614,262	1,048
1906.....	25252	26,090,358	1,033
1907.....	26386	26,867,827	1,018
1908.....	27611	27,102,769	982
1909.....	28585	28,179,343	986
1910.....	29692	29,506,304	994
1911.....	30293	30,560,554	1,009

In 1901 the investment per capita is reported as \$1,109. A gradual reduction follows until 1908 when the per capita investment is reported at \$982. From that time there is a slight increase in the investment each year until 1911 when it is reported as \$1,009.

In order to determine more accurately the present value of the State hospital plants, the State Comptroller has employed during the past year an appraiser who has visited the different hospitals and made a careful estimate of their value. Up to the present time such appraiser has reported on only eight of the institutions. A statement of the valuation given by him together with the number of patients in each hospital and the per capita investment is shown in the following table:

** Neither the property nor patients of the Long Island State Hospital are included in this table.*

TABLE 2. *Value of the property of certain State hospitals as determined by George F. Picken, Appraiser for the State Comptroller, January 1, 1912.*

State Hospital	Patients	Value of Plant	Per Capita Investment
Utica.....	1550	\$1,663,300	\$1,073
Willard.....	2422	2,166,900	895
Buffalo	2012	3,030,100	1,506
Rochester	1460	913,700	627
St. Lawrence.....	2020	2,910,000	1,441
Gowanda	1108	983,250	887
Kings Park.....	3491	3,523,900	981
Central Islip.....	4399	3,077,905	700
<hr/>		<hr/>	
Total.....	18462	\$18,169,055	\$983

The table shows a wide divergence in the per capita investment in the different State hospitals. Buffalo is reported as having a per capita investment of \$1,506, while that of Rochester is only \$627. The average per capita investment of the eight hospitals is \$983. As Manhattan State Hospital and Hudson River State Hospital, two of the most costly institutions under the State Hospital Commission, are not included in the appraisal the average shown is probably somewhat less than the general average per capita investment. It will also be noted that there is a close agreement between the per capita investment as reported by the superintendents for 1911 and the per capita investment as shown by the appraisal.

From the values given we may safely take \$1,000 as a fair average per capita investment on account of each patient provided for in the hospitals. This, of course, does not indicate that the average patient costs the State a thousand dollars on account of the home provided for him in a State hospital, but it does indicate the outlay per patient that has been necessary on the part of the State to provide institutions that can properly care for the number of patients now in the State hospitals.

Given an investment in the hospital plant of \$1,000 per patient, we have to determine the annual charge to each patient on account of such investment. From a business or economic standpoint, the State is entitled to charge each

patient interest on its investment and a sufficient amortization charge to cover depreciation and replacement of buildings, equipment and machinery. In other words, the economic loss to the State on account of the investment is the interest on the money invested and the loss of value in the property in which the investment is made. If we reckon the interest charge at 4 per cent the rate the State pays on its recently issued highway bonds, and the amortization charge at 3 per cent, which seems a reasonable rate to cover depreciation of buildings, equipment and machinery, fire loss and the necessary replacement and remodeling on account of the introduction of new methods of treatment and changes in the standards of care, we have a total charge of 7 per cent on the investment or an annual charge to each patient on account of the home furnished him, of \$70.

COST OF MAINTENANCE OF AN INSANE PATIENT.

The "maintenance" of patients in a State hospital includes all expenditures for officers' salaries, wages, provisions and stores, ordinary repairs, farm and grounds, clothing, furniture, bedding, books and stationery, fuel and light, medical supplies, transportation of patients and miscellaneous expenses.

The cost of maintenance of the patients in the State hospitals has been very accurately determined since the establishment of the State Commission in Lunacy. The amount has varied from year to year in accordance with the rise and fall of prices and the change in methods and standards of care. The following table gives the average cost of maintenance in each of the fourteen civil State hospitals for the five years ending September 30, 1911:

TABLE 3. *Average per capita cost of maintenance of patients in each of the State hospitals for the five years, 1907-1911.*

State Hospital	Average Annual Cost of Maintenance Per Capita 1907-1911
Utica.....	\$199.23
Willard	186.19
Hudson River.....	198.78
Middletown	188.40
Buffalo.....	190.92
Binghamton	187.65
St. Lawrence.....	200.81
Rochester.....	198.96
Gowanda	187.94
Kings Park.....	182.32
Long Island	238.65
Manhattan	180.71
Central Islip.....	171.14
<hr/>	
All hospitals	\$188.14

From the table it is seen that the average annual cost of maintenance for the past five years varies from \$171.14 in the Central Islip State Hospital to \$238.65 in the Long Island State Hospital, the former being one of the largest hospitals and the latter the smallest. The general annual average per capita cost of maintenance in all of the State hospitals for the past five years, is \$188.14. This amount may justly be considered a fair average index of the annual cost of maintaining an insane patient in a State hospital.

COST OF GENERAL ADMINISTRATION, ETC.

Under this heading is included the cost of maintenance of the general office of the State Hospital Commission, the supervision and inspection of the work of the State hospitals, the scientific work carried on by the Psychiatric Institute and the work of the State Board of Deportation. The annual per capita cost chargeable to the patients on account of this work for each of the past five years, is shown in the following table:

TABLE 4. *Cost of the general administration, supervision and inspection of the State hospitals, including the work of the Psychiatric Institute, and the State Board of Alienists, 1907-1911.*

Year	Number of Patients	Total Cost	Per Capita Cost
1907.....	27102	\$115,671	\$4.26
1908.....	28348	119,949	4.23
1909.....	29363	123,267	4.19
1910.....	30445	118,966	3.91
1911.....	31051	145,977	4.70
Average annual cost per capita.....			\$4.27

From the above statement it is seen that the per capita cost of general administration has varied somewhat from year to year. The average for the five years \$4.27, may be considered the normal cost of this service.

LENGTH OF HOSPITAL RESIDENCE OF AN INSANE PATIENT.

As stated in the preceding article an enumeration of the foreign born patients in the civil hospitals made February 10, 1912, showed that the average length of hospital residence of the 13,163 foreign born patients then resident in the State hospitals was 9.85 years.

As the number of annual admissions of foreign born patients to the State hospitals has been increasing from year to year there are now in the hospitals a relatively larger number of patients of recent admission than there would be, had the yearly admissions been uniform. The average length of hospital residence as above determined, therefore, would be a considerably shorter period than the complete hospital life of the average patient. Just what the difference would be can not be accurately stated, but it may be safely assumed to be over one year. Making such assumption, the complete hospital life of an average patient is approximately eleven years.

SUMMARY.

Bringing together the four elements entering into the total cost to the State of an insane patient in a State hospital, we have:

Annual cost on account of investment in hospital plant..	\$70.00
Annual cost of maintenance.....	188.00
Annual cost of general administration, etc.....	4.00
Total annual cost.....	<u>\$262.00</u>

Multiplying the annual cost by eleven, the assumed average number of years of hospital life, we have a total cost of \$2,882. This would be the amount that should be collected by the State from the estate of an insane patient, if an annual reimbursement for hospital care were made. If, however, no payments were made by the patient the total burden to the State at the time of the patient's death or discharge, eleven years after admission to the hospital, would be the sum of the annual amounts expended for maintenance plus interest thereon to the time of the discharge of the patient. If simple interest at the rate of 4 per cent were charged, the total amount chargeable to the patient would be \$3,516.

ANNUAL COST OF THE FOREIGN BORN INSANE IN THE
STATE HOSPITALS, AND ADDED BURDEN OF THE
FOREIGN BORN FIRST ADMISSIONS OF 1911.

At \$262 per patient the total annual cost to the State of the hospital care of the foreign born patients now in the civil hospitals is \$3,448,706. So long as the yearly addition of immigrants to the hospitals continues to increase this annual burden will continue to grow.

At the rate of \$2,882 per patient the admission of 2,737 new foreign born patients to the State hospitals in 1911 will involve a total expense to the State before these patients are finally discharged of \$7,888,034.



